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Northwest Medicine

Owned and Published by the State Medical Associations of
Oregon, Washington, and Idaho

Edited Under the Direction of the Board of Trustees

VOLUME III (NEW SERIES) JANUARY—DECEMBER, 1911

Issued Monthly by Northwest Medical Publishing Association

PORTLAND, ORE. SEATTLE, WASH. BOISE, IDA.

NORTHWEST MEDICINE

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The Journal of the State Medical Associations of Oregon, Washington, Idaho and Utah
ISSUED MONTHLY BY NORTHWEST MEDICAL PUBLISHING ASSOCIATION.

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DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF THE PACIFIC NORTHWEST
Subscription Price $2.00. In clubs of twenty or more $1.00.

Entered March 14, 1903, at Post Office, Seattle, Wash., as Second Class Matter, under Act of Congress of March 3, 1879.

VOL. III.
New Series.
JANUARY, 1911
No. 1

ADDRESS

MANAGEMENT OF POSTOPERATIVE CASES.*

By Joseph S. Richards, M. D.,

SALT LAKE CITY, UTAH.

The usual subject of a presidential address deals with one of the great public questions of interest to the medical profession at large. Having had no active part in the development of the greater problems, I have thought it better not to discuss one of them, but to bring to your attention a few observations in the management of postoperative cases.

In the past I have persistently refused to put on record my beliefs in medicine or surgery, for I have always felt that if I did so, sooner or later I would want those records destroyed. I am in perfect sympathy with the poet who wrote, "Thoughts unexpressed may fall back dead, but God himself cannot kill them when they are said."

The author of one of our best textbooks on surgery was recently heard to express regrets that the volume bore his name; the book had not been in print one year when there was much in it that did not represent his views. Recently a publisher approached one of our leading surgeons on the subject of getting out a work on surgery. He replied, "Not on your life. I could not write a book that I would not want to rewrite within twelve months."

Consider the papers read at our county medical gatherings; how few of them merit a second reading, and not infrequently the time is all but wasted which was spent in the first reading. About the only good that comes from the average paper is that something is said that suggests something better to those listening to it. I do not believe any one present will claim that the writer of the average paper is not the one who is most benefited by its preparation. Much more good usually comes from the mingling with medical men at our annual gatherings, than from the information imparted or received. It is only occasionally that papers read in our meetings materially change the views of any considerable number of those present. If anything out of the ordinary be presented and strongly advocated, the man who does so is not infrequently regarded as a crank, and if the idea be one of merit, the writer does not always get credit for it, because the time is not opportune when it is presented.

Years ago, unfortunately for me at the time, in a meeting in this city I strongly advocated feeding typhoid fever patients as I now feed postoperative cases. With one exception every man who discussed my remarks amused himself quoting authorities against my position, and the president resigned his chair to remark that he hoped when he had practised as long as I had that he would know better than to antagonize the writers of our best textbooks.

The average physician or surgeon rarely attempts anything original or has any positive personal opinion to advocate, and is apt to regard those of limited experience who have as presumptuous, especially if they have the courage to strongly advocate and defend them. What is much needed in the profession is just this kind of courage. The want of it keeps many in the background and is a loss to the profession.

It seems impossible that any man can spend a life time practising medicine or surgery, if he be at all observing, and not learn something that would benefit others. To a man who does surgery the postoperative care of patients usually causes more anxiety than the operation itself, and this anxiety can be reduced materially, if not to a minimum, if surgeons have some well defined methods of handling these cases. If the pathology has been removed, therapeutics play a minor part in the after-treatment, and are usually well defined. At this stage the comfort and well being of the patients will depend largely upon the nourishment they can take with benefit and the movements they can undergo without injury. If we can possess ourselves with reliable information to guide us in feeding patients and in regulating their movements, we ought to have less anxiety in their management. In nearly all cases our patients can supply us with such information. They know better than we when they are hungry and what would satisfy that hunger, almost, if not quite as well, in disease, as in health. They also know better than we when they are in pain and the movements they can make without increasing the pain. Do we place the proper estimate upon the knowledge of our patients and make the use of it we should? Some do but many do not.

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*President's Address, read before the Sixteenth Annual Meeting of Utah State Medical Association, Salt Lake City, Utah, Oct. 3-4, 1910.

How often do we see on the bedside chart, under the heading of "diet," written "beef tea, chicken soup, broth," or some kind of slop that seldom satisfies and more seldom benefits the patient. There are no particular objections to such fluids if patients desire them; otherwise, those fluids are positively contra-indicated. They occasionally do some good as mild stimulants, but the nourishment they contain is practically nil. In cases where nourishment is not indicated and is a matter of little importance, and they think they need something to keep up their strength, such fluids, if not distasteful, are allowable because, if they do no good, they seldom do harm and if prescribed will often please the patient's friends, which is a matter of no small consideration.

My position in regard to feeding postoperative cases is the same as it has been for years in typhoid cases, namely, to consult my patients and to pay the greatest respect to their desires. It is only in exceptional cases that a patient cannot relieve me of the worry and anxiety incidental to selecting a suitable diet.

In operations not involving the digestive tract, there is little excuse for placing the restrictions upon diet that doctors are prone to place. In cases where the tract is not involved, guess work rather than common sense or knowledge usually controls. Experimental physiology teaches that the psychic influences on digestion are more potent than the mechanical or chemical, but we do not always make use of this fact in selecting diet. The profession at large is just beginning to learn that in typhoid fever, where the lesion to some extent is exposed to the action of food taken, there is much less danger in allowing the patient to select his food than was formerly conceded by the authorities on typhoid. If a well person cannot eat food that is positively distasteful without nausea, how can a sick person do so? Yet how often do we hear our patients tell us they are hungry and cannot eat what is prescribed?

The doctor who said he wanted placed on his tombstone after his name, "I fed my fever patients," would have injured his reputation little if any, if he had added, "what they most desired." It is not so much allowing patients to eat, as how they do it and the quantity they eat. Wholesome food that is properly cooked and that can be taken with a relish and thoroughly masticated will seldom, if ever, do as much harm as simpler food that is distasteful.

I cannot in a brief address tell you my views about the feeding of all kinds of cases but, if I were compelled to make the attempt, I would commence by saying I seldom if ever find it necessary to urge nourishment on patients. If they go, as they sometimes do, from 36 to 72 hours without taking nourishment of any kind, I am certain that something more serious than need of food ails them, and do not try to relieve them by feeding. I am referring now particularly to postoperative cases, but I am in the habit of managing other cases in much this same manner.

I am quite certain that the healthy stomach will not take care of food that is positively distateful and there is no reason for believing that the sick are unlike the well. To put any food into the stomach when that organ protests, is assuming an unwarranted responsibility. If a patient expresses a desire for food of any particular kind, we should think twice before we refuse our permission for him to at least eat sparingly of it. If the food desired appears to be unsuitable or be something we would not think of selecting, we should caution him to eat of it sparingly at first and, if it agrees with him, let him increase the amount at another time. If we will allow patients to select their food under these restrictions, we will seldom, if ever, have occasion to regret doing so.

I know there are many here who will not agree with me, but there are many more who will than would have done so in the recent past. If we can serve our patients and add to their comfort by allowing them to select their food, we can do the same by allowing them greater freedom than is the custom in selecting comfortable positions. In clean, and indeed most septic cases, patients should be allowed to do about as they please as to their movements, *short of causing pain.* This is a broad statement, and I may not be able to give you satisfactory reasons for making it, as it is based upon personal observation and experience, and not upon accurate scientific determinations. I will make my position a little more definite and then attempt to reconcile it with well known facts.

I never knew a patient to do harm to a wound, or to delay healing by movements of any kind that would not cause pain, and I believe it to be as impossible to do so as it would be to make the wound without pain. Pain in the wound is due to tension, and anything that will increase or diminish the tension above normal will cause pain and interfere with normal healing and repair. The best means of knowing what the normal tension in and about a wound should be are the sensations of the patient. Any position that will have an unfavorable effect upon the wound will cause discomfort or pain, which are subjective symptoms, hearsay to a surgeon but real to the patient. If any one is competent to determine what movements are permissible the patient should be, when informed of the significance of pain. Fortunately for the patient, the tissues that comprise the wound are either voluntary muscles or controlled by them, and as movement will cause pain, he will exercise his right of control.

Under certain conditions, as in sneezing, coughing and vomiting, complete control is lost, but the patient on account of the pain produced will limit the spasmodic contractions as much as possible. The argument most often advanced against patients being allowed the freedom here contemplated is that it would increase the liability of hernia. Whether this be true or not is a debatable question. If a postoperative abdominal patient, who had sat up or been out of bed the first, second or third day, should happen to get hernia, it would no doubt be the proper thing for a careless or incompetent operator to attribute it to the getting up instead of faulty technic. A doctor could honestly believe this and could positively convince his patient that this was the case. Should we have such a result, we would be dishonest to ourselves if we did not shoulder the blame, unless we could discover some other reason than that of sitting or getting up or walking about.

If, as believed, intra-abdominal tension is responsible for many postoperative hernias, every means known should be used to prevent it. What means can we use to prevent the tension? Certainly tying down to the bed with instructions to keep quiet will not do so. Such treatment does not promote digestion, and poor digestion is the principal cause of distention of the hollow viscera, which is a source of intra-abdominal tension. Straining, of necessity, must be more or less harmful in cases where hernia is feared. Ask any one who has had an abdominal operation, whether the effort to expel flatus, urine and feces hurts the wound, and in nine cases out of ten, his answer will be positively "yes." If you are not in the habit of letting your patients get out of bed to use the commode, when it requires an effort for him to have his discharges in the lying position, I earnestly recommend that you adopt the habit and you will be repaid by gratitude.

Putting your patient in splints by rigid instructions to keep quiet is a relic of the past and is not the result of intelligent observation and experience. Infants and young children whom you cannot keep quiet will take all kinds of liberty with the doctor's instructions relative to moving about and do well as a rule. The only restraint they know is that of pain. In exploratory operations upon elderly people it is customary to get them up and about early, and they are benefited by so doing. If good for old people, why not for the young or middle-aged?

I never did any experimental work on animals, but I have read somewhere that animals operated on, seldom, if ever, do themselves injury by moving about freely. We are all glad when our patients can leave the bed, because we know they will begin to gain strength. Reasonable exercise that can be indulged in without pain is safe, will promote health and promote healing, and should be encouraged unless there are stronger reasons than the mere existence of a clean, healthy wound, properly sutured and dressed.

I hope those who have listened to this address, if it be worthy of such a title, will not go away with the impression that I advocate gormandizing or insist upon patients getting out of bed or moving about, when so doing would cause discomfort or pain. On the contrary, I am strongly opposed to excesses of any kind.

In my efforts to convince some of the profession, as well as patients, that the latter could indulge their appetites and move about with considerable freedom, subject to the limitations mentioned, I have exposed myself to criticism by the profession and have suffered in consequence. That I have so suffered I have the most positive evidence, and I would not recommend any of you to come out in the open and advocate anything not considered orthodox, no matter how strongly believed, unless you are prepared to put up with unpleasant consequences for so doing.

ORIGINAL CONTRIBUTIONS

SEQUELAE TO THE BLADDER OF HYSTERECTOMY AND SALPINGO-OOPHORECTOMY AS OBSERVED BY THE UROLOGIST.*

By G. S. Peterkin, M. D.
SEATTLE, WASH.

As an urologist, I am invading the territory of both the general surgeon and the gynecologist. What I shall say may or may not absolutely scientifically correct, may not apply to the individual, but it does to the class. If the statements made are correct, the general surgeon and gynecologist can profit by listening to what will be said; their knowledge and experience will teach the lines along which this subject should be further pursued.

My reasons for writing this paper are that practically within one year eleven women have been referred to me because of urinary symptoms, frequent and painful urination, etc. When a woman is referred to an urologist (the public thinks he treats only men and the medical profession seems willing to foster this idea), there is one thing certain, that is, if there be any kind of internal medication or local treatment which has not been tried in each case, it is because the treating physician did not know about it. The main reason why the various forms of treatment did not give results was that the cause to be removed required surgical treatment and, if this fact had been recognized, would the urologist ever have seen the patient?

Six cases were hysterectomies; all had cystoceles. Two had never borne children so that the perinea were intact. Of the four cases remaining, only one showed a perfect repair of the perineum and all four admitted attempt at repair had been made previous to the hysterectomies. Four of the six were vaginal hysterectomies.

Looking at these cases, I have drawn the following conclusions:

(1) That vaginal hysterectomy should be considered an antiquated operation; for proper care cannot be given to the support of the bladder and thus cystocele prevented.

(2) That, had the operators at the time of the operations given proper care to the bladder, cystocele would not have occurred, requiring a secondary surgical operation.

(3) That, because hysterectomy is performed, there is no reason why perineal tears should not be repaired.

I have said cystocele was the cause of the urinary symptoms complained of. Immediately, I can hear the statement that the majority of cystoceles give no disagreeable urinary symptoms. A large majority of men over 60 have enlarged prostates, yet, roughly, 10 per cent. only require operation. What is cystocele but a postprostatic pouch?

The question at once arises, "Why do we have symptoms in the one case and not in the other?" This question will be answered chiefly by two aids to diagnosis: first, the cystoscope; second, the laboratory. The latter will not only serve to answer the question as to diagnosis, but will give a remedy that is an invaluable aid toward recovery, to the surgical operation. I mean the culture test which, when it demonstrates the infecting microorganism, especially the colon bacillus, as it very often does, we have an acknowledged form of treatment, the bacterin.

The diagnostic technic of the cystoscopic examination demands too many details, therefore, must be omitted. But if a cystocele exist, catheterize after a patient has voided her urine; often little if any urine will be obtained. Now place patient in lithotomy position, with pelvis tilted forward; insert cystoscope, withdraw the obdurator, often no urine. Insert lens, place patient in the Trendelenburg position, then the pelvic viscera will fall toward the diaphram; turn on the light and see how much fluid will be observed—fluid which comes from the cystocele; you will be surprised.

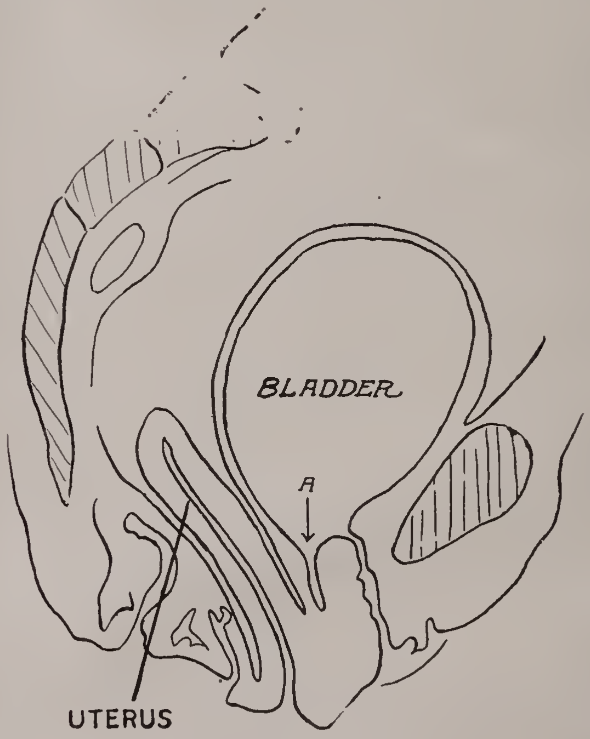

Fig. 1.
After Halban and Tandler.

Explanation is simple. Look at (a) fig. 1, a frozen section. Will catheter withdraw urine from a cystocele of this character? No. Now place patient in the Trendelenburg position. Will not the urine which is hidden in this pouch, when bladder and viscera fall toward the diaphram, come within view? Moreover, with the bladder partly filled, will not the cystoscope show a line of inflammatory thickening or abrasions, where these surfaces come in contact with one another, and the residual urine stays?

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*Read before the Thirty-sixth Annual Meeting of the Oregon State Medical Association, Portland, Ore., Sept. 7-9, 1910.

We have spoken of five other cases. Two are cases of unilateral oophorectomy and salpingectomy, right side; symptom, chronic cystitis. Cystoscopic examination demonstrated bladder pulled to right side by adhesions to the extent even that the left ureteric opening was in line with the urethra, held patent and exposed to infection. These adhesions practically made a pouch on the right side in which residual urine stayed, as demonstrated by the dull and congested appearance of the mucous membrane, and the thickening, due to inflammatory infiltration.

Here the cystitis could not be relieved until the adhesions to the bladder were removed so that the organ could empty itself, which it could not do so long as adhesions on the right side held taut, rendered the bladder collapsible, a folded parachute (fig. 3), instead of an inverted ball (fig. 4). This teaches what? That salpingectomy or oophorectomy are not performed correctly unless cognizance is given the adhesions on both sides of the pelvis with the object of permitting the pelvic viscera, especially the bladder, to regain its normal position, thus its physiologic power of contraction.

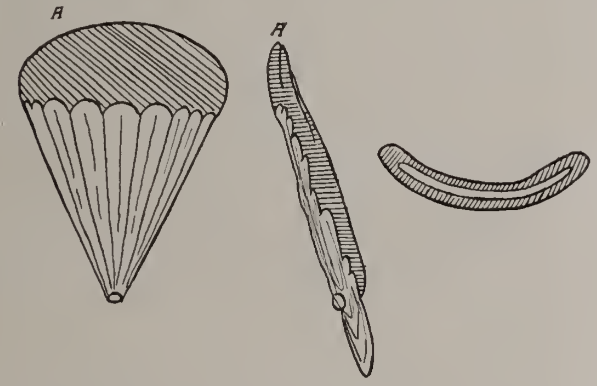

Fig. 2. Fig. 3. Fig. 4.
(Diagrammatic drawings.)

Fig. 2.—A parachute, open, represents bladder distended; (a) adhesion.

Fig. 3.—Parachute, closed. (a) Adhesion being stationary, parachute collapses longitudinally; thus the bladder would do. if similar adhesion present, not absolutely close out all space, as does an inverted rubber ball (Fig. 4) and a normal bladder, without adhesions.

The three remaining cases complained of mild symptoms of cystitis but mainly of pain in the back, over right kidney. All three were married women, had had nephrorrhaphy performed for prolapsed kidney. In other words, the operation in each case had been unsuccessful. Beside a prolapsed kidney, these patients presented cystoceles and prolapsed uteri.

Normally the ureter from the pelvis of the kidney extends in a direct incline to the bladder (see diagram, fig. 5). The kidney is practically a fixed organ. What will happen if the ureter at the bladder assumes position illustrated in fig. 6 (a), as it does in cystocele and, in assuming this position, descends two or three inches in the pelvis? The kidney being fixed, will it (the kidney) not act as a direct support, therefore be pulled upon? The ureter being stretched, its calibre is diminished and its direction changed to a curve instead of direct line. Therefore, increased resistance to outflow of urine, in other words, these conditions will produce back pressure. Back pressure means congested kidneys, increased weight of kidney, lessened vitality of kidney structure, all conditions favorable to prolapse. These conditions the cystoscope and ureteral catheter will demonstrate as facts. If these be facts (conceding that they are facts) nephropexy, if done without repair of the pelvic conditions mentioned, is not good surgery. In fact, if the pelvic surgery were done, would there be any need of nephropexy?

To reiterate, vaginal hysterectomy is an obsolete operation, for reasons given. Salpingectomy and oophorectomy are scientific operations only when they aim to leave the pelvic viscera in a normal position, and the man who performs nephropexy, without repair of the pelvic viscera when prolapse exists, is not a surgeon but an operator.

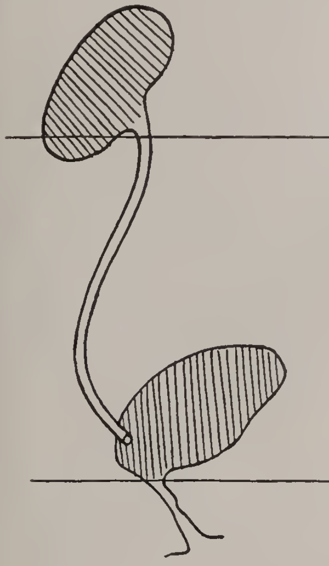
Fig. 5.

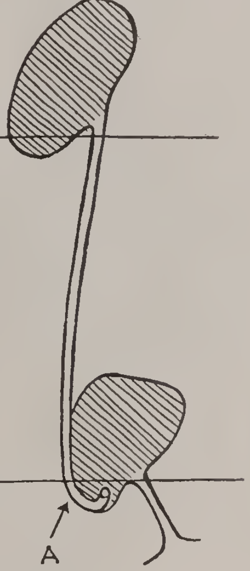

Fig. 6.

You may say I have complained of an evil but have not offered a remedy. This is true, but there is one principle governing bladder drainage that is essential to the organ's successfully emptying itself, that the trigone and base be held firmly in a position so that they slant toward the urethral opening. That this is an essential factor is well illustrated, if you will look at the relationship of the normal bladder to the uterus, as is illustrated by the cut taken from Deaver (fig. 7). If you will note the bladder is adherent, not only to the cervix (a), but partly to the body (c); the fundus of the uterus, in the normal position, as the bladder empties itself, presses down upon the fundus of the bladder as the thumb presses in a rubber ball and, in so doing, renders taut the trigone and base, thus aiding in emptying the bladder. Therefore, the operation that will attain this position for the base of the bladder, making it stationary, will be the successful operation.

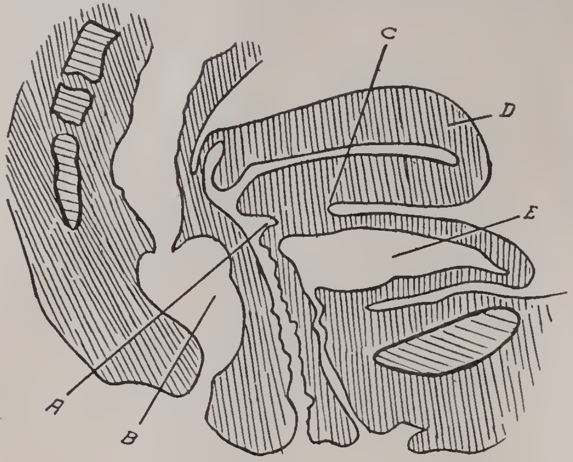

Fig. 7.
A, cervix; B, rectum; C, body; D, uterus; E, bladder (after Deaver).

But no one operation will suffice for all cystoceles, for a cystocele may be the result of a tear of one of these four pelvic planes, as illustrated by R. L. Dickinson, the post-pubic, the urethro-vaginal, recto-vaginal or the ano-vaginal (fig. 8). Or the tearing or stretching of the fascia at the base of the bladder may produce hernia, or the pelvic base may be intact and cystocele be the result of defective intrapelvic support. Therefore, in one case, hysterectomy with fixation to the broad and round ligaments may suffice; in the next coloporrhaphy with perineorrhaphy or in the third, interposition of Watkins may be the correct operation, etc. Which operation will produce the best results in each case of cystocele, an exact diagnosis of the true cause of the cystocele will tell. With the merits of each operation I cannot deal, for time is limited and not being, as yet, an open competitor in the field of gynecology or surgery, I am aiming only to demonstrate an abuse, leaving the true reform in the hands of those to whom it belongs, offering my assistance as an urologist, if it be deemed of value, hoping that this paper will lead to better care of the bladder in future surgical operations, thereby rendering cystocele a less difficult problem.

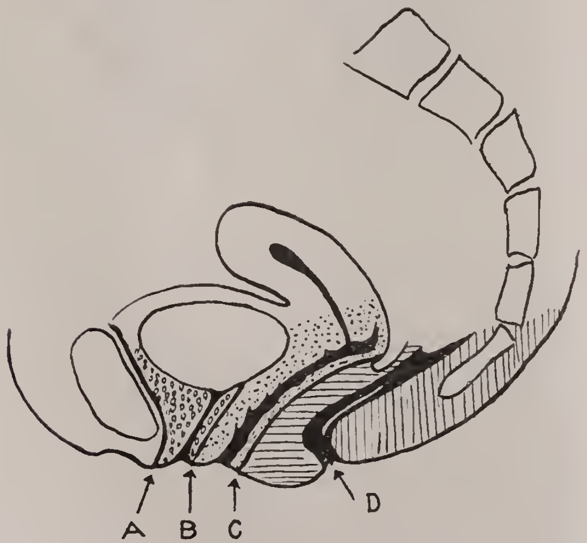

Fig. 8.
Segments that drop downward, sliding along cleavage lines—(1) urethral, (2) vaginal, (3) perineal, (4) retro-anal. Cleavage planes—(A) post-pubic, (B) uretro-vaginal, (C) recto-vaginal, (D) ano-vaginal (after R. L. Dickinson).

**Genital Prolapse; Its Operative Correction Based on a New Study of Cleavage Lines and Sliding Segments, by Robert L. Dickinson, M. D., in Am. Jr. of Obstetrics and Diseases of Women and Children (July, 1910).

DISCUSSION.

George S. Whiteside, Portland: The trigone is not displaced as often as is the part of the bladder which is posterior to the inter-ureteric ligament. Unless complete hysterectomy has been done, the relation between the trigone and the cervix of the uterus is not much disturbed. Anomalous positions of the ureter openings do not necessarily, show abdominal distortion of the bladder. There are many cases which have had no pelvic trouble of any sort, both in the male and in the female, where one or the other ureteral opening is not quite in a normal position.. Consequently, I do not think it is fair to the gnecologist to condemn his previous operation on the ground that ureteral openings are not symmetrical. On the other hand, the portion of the bladder that is posterior to the interureteric ligament is the part most often displaced. We then have a post-trigonal pouch. Sometimes, owing to an ulcer or hypertrophy of the muscle bundles in the bladder wall, we get a bladder hernia or diverticulum, often with a very small opening connecting the cavity of the pouch with the general cavity of the bladder.

W. B. Holden, Portland: It is well worth while to leave the bladder in its normal relationship after laparatomies. In sewing up the parietal peritoneum with a running catgut suture, many times the bladder is drawn upwards when the suture is tied at the upper angle of the wound. This displacement of the bladder frequently causes trouble. This trouble can be very easily prevented by fastening the lower stitch in the peritoneum directly into the fascia. This fixes the bladder where it belongs and it cannot be displaced upwards, when the running peritoneal suture is tied.

E. J. Labbe, Portland: Many of these patients come to the physician not on account of symptoms in the genital but in the urinary tract, and it is not till then that they find out that the disease is it is not till then that they find out that the disease is in the genital tract, as you instance, a growth in the uterus with mal position or any other disease which would demand hysterectomy. After a few months you find a distorted bladder, so that the patient is suffering from more or less distention which at the time of hysterectomy is beyond repair. Hysterectomy is not the cause of it but it is brought out more prominently afterwards because there is more room for the bladder to sag down after those organs have been removed. I think all operations that rely upon suspending the bladder with peritoneal adhesions will afford some relief, but they will be a failure in time.

THE EARLY DIAGNOSIS OF PULMONARY TUBERCULOSIS*

By Ray W. Matson, M. D.,
PORTLAND, ORE.

Tuberculosis is probably the most common of all diseases with which, it is safe to say, all of us at some time in our lives are affected. This view is fully substantiated by postmortem findings. Autopsies performed in metropolitan hospitals show that fully 70 to 80 per cent. of the bodies of all adults exhibit evidence of tuberculosis. It is also one of the most curable diseases, as fully 75 per cent. of the persons afflicted overcome the infection, or it is at least held in abeyance, and thus the disease exists for years in a latent form and death may finally occur from other conditions.

The open-air movement has brought the subject of tuberculosis into great prominence before the public and the medical profession, so that a large body of enthusiasts have been drawn to give closer study to the disease in various aspects, associations have been organized for its study and prevention, medical schools have created chairs for its special teaching. The medical profession in general has experienced an astonishing revival of interest, resulting in abundance of literature dealing especially with this subject.

Important for the cure of tuberculosis is its early diagnosis, the tremendous importance of which, at least from an economic standpoint, is appreciated when we consider that the majority of persons are affected during the most productive period of their lives, that is, during the age period from 20 to 35 years. We now know that a great many individuals who are under-nourished, delicate and often referred to as being always frail and weak, are really the subjects of latent tuberculosis. A great majority of these persons harbor tubercle bacilli but the body forces have been sufficient, without serious impairment of health, to hold the infection for even years in abeyance and the disease only manifests itself when something occurs to lower the host's powers of resistance. Unfortunately it is often then too late for recovery to take place.

We have learned to realize that, considering the extreme frequency of tuberculosis, unaccountable losses of weight or strength, fatigue upon slight exertion and many other associated conditions are often manifestations of a slowly advancing tuberculous infection. The suspicion of such a disease is certainly, at least, justified. The frequency of a previous history of repeated attacks or increased susceptibility to colds, slight persistent cough, pains in the chest, or referred to the shoulder often attributed to rheumatism, should always arouse our suspicion. Equally important is the history of association with admitted tuberculous persons, or existence in places where consumptives have even worked or resided, so-called "tubercular nests."

A detailed discussion of all the means and methods at our disposal for the early recognition of tuberculosis is not possible in the short space of time allotted me. I must, therefore, restrict myself to a consideration of some of the methods which, while not entirely new, are recognized to be of the utmost importance and within the grasp of the general practitioner. No reference will be made to laboratory procedures, or even modern methods of sputum research, since those cases presenting tubercle bacilli can no longer be considered in the early stages which, from a pathologic standpoint, is true because excavation of lung tisue must have taken place. The question as to whether hemoptysis is an early sign is difficult to decide. Certainly it is often the first symptom, but here too destruction of lung tissue must have taken place and these cases must, therefore, also have passed through the early indurative and infiltrative stages.

Measurement of Temperature.

The careful use of the thermometer cannot be too strongly urged; it is one of the most valuable instruments we possess, second not even to the stethoscope, not only for the early diagnosis and prognosis but as a guide in subsequent treatment. The tuberculous subject is characterizedd by an instability of temperature. At his very best he is on the verge of becoming febrile and the slightest excitant is consequently sufficient to provoke an elevation. While it is true this also occurs under other conditions, yet it is also true that these elevations are temporary and completely subside after a half hour interval of repose. The susceptibility of the tuberculous individual to temporary elevations of temperature after exercise is much greater than in healthy persons. The febrile reaction is not only more marked, but of longer duration, the rise being frequently sustained for many hours in spite of rest. (Fig. 1.)

Regarding the Physical Examination.

The value of inspection and palpation is fully recognized, and it is unnecessary to point to its importance. More than seventeen years ago Krönig described a method for the typographic percussion of the lung apices, but only recently has it been regarded with deserved interest. Oestreich, as well as myself, subjected the method to an experimental test upon cadavers and obtained extremely favorable results. Wolf-Eisner introduced the term "apical isthmus," which has proven very useful for clinical purposes. The essentials of the method lie in the observation that it is very difficult to determine the absolute position of the lung apex, but that it is more

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*Read before the Thirty-sixth Annual Meeting of the Oregon State Medical Association, Portland, Ore., Sept. 7-9, 1910.

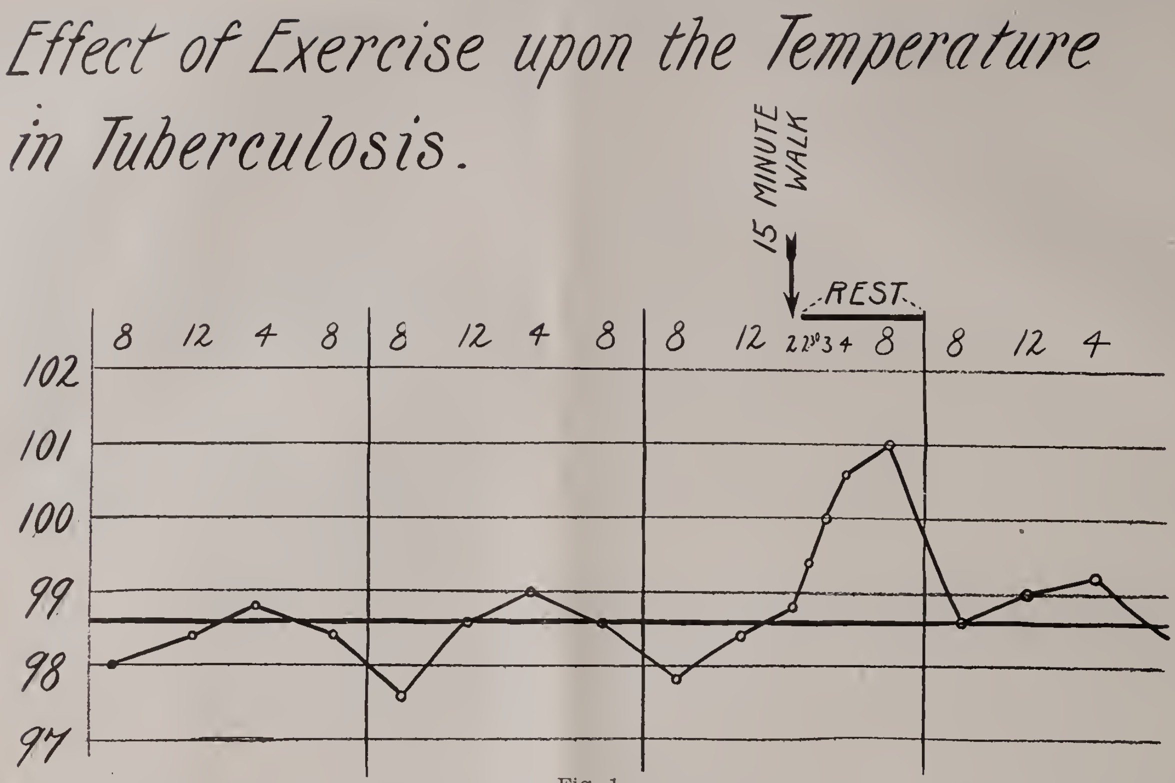


Fig. 1.

advantageous to project the lung sounds upon the shoulder girdle.

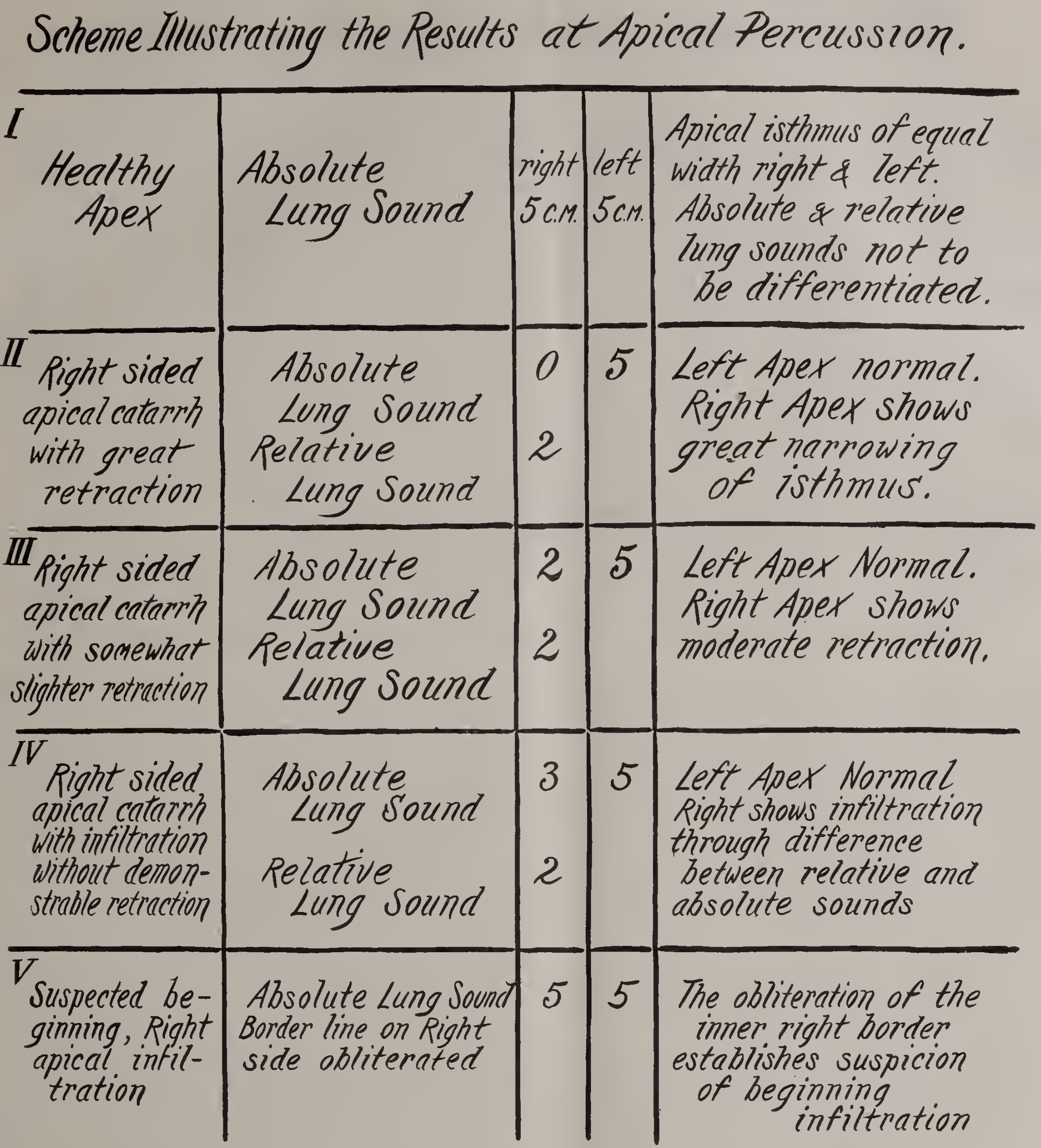
Retractions which, by the determination of the absolute elevation of the apex, according to the method of Goldscheider, amount at most to but a few millimeters difference, yield by the use of Krönig's method a considerable narrowing of the band of lung sound projected upon the shoulder. For the successful application of Krönig's method, at least two rules, which alone guarantee useful results, must be observed. First, lightest form of finger percussion must be employed; the stroke must be so light that on percussing over air-free tissue, *nothing is heard and only a feeling of resistance is perceived.* The method thus depends more upon the sensation transmitted to the fingers than upon the ear. Second, one must observe carefully that the percussed finger lies parallel with the lines very fittingly described by Krönig as direction lines. (See drawing.)

The lung borders are most readily determined by percussing from above downward. In this way one soon arrives at a point where normally a decreased feeling of resistance and full lung sounds are encountered. The line of demarkation is abrupt. Infiltrative processes, in contradistinction to retractive processes, are more difficult to determine since here a feeling of resistance is also encountered and the dullness of air-free tisue does not pass abruptly into the resonance of normal lung tissue, so that here an intermediate zone of relative lung sound must be recognized. By the application of the Krönig method, it is certain that one obtains in healthy persons sound fields, the narrowest part of which, "the isthmus," measures at least four centimeters. (See Fig. 2.) The appearance of the entire formation obtained by percussion, peculiarities in shape, obliterated borders, presence or absence of relative lung sounds, and measurement of the apical isthmus should be noted upon the case record. These results can be controlled from time to time and even in after years referred to.

Auscultation has offered us no new suggestions for the early diagnosis of tuberculosis. It was formerly decisive for the diagnosis of initial forms but now, following the application of apical percussion, it occupies a second place. However, if one wishes to diagnose *active tuberculosis* upon clinical grounds alone, auscultation is indispensable. Here the occurrence of rales is extremely suggestive and, when possessing a clinking quality, is considered by some as an infallible sign of consolidation (for the reason that these sounds originate in the finer bronchioles and never assume a clinking quality, unless transmitted through consolidated tissue). If, however, we await the appearance of rales, it is often, then, no longer early tuberculosis.

X-RAY.

The value of the X-ray is a much mooted question, such expert operators as Paul Krause, Immelman, Cohen, Levy, Dorn, and many others claiming to have found changes both fluoroscopically and radiographically which are more or less typical of early tuberculosis. Personally, I have found it extremely valuable, especially in confirming the results of



Scheme Illustrating the Results at Apical Percussion.

I Healthy Apex	Absolute Lung Sound	right 5 c.m.	left 5 c.m.	Apical isthmus of equal width right & left. Absolute & relative lung sounds not to be differentiated.
II Right sided apical catarrh with great retraction	Absolute Lung Sound Relative Lung Sound	0 2	5	Left Apex normal. Right Apex shows great narrowing of isthmus.
III Right sided apical catarrh with somewhat slighter retraction	Absolute Lung Sound Relative Lung Sound	2 2	5	Left Apex Normal. Right Apex shows moderate retraction.
IV Right sided apical catarrh with infiltration without demonstrable retraction	Absolute Lung Sound Relative Lung Sound	3 2	5	Left Apex Normal Right shows infiltration through difference between relative and absolute sounds
V Suspected beginning, Right apical infiltration	Absolute Lung Sound Border line on Right side obliterated	5	5	The obliteration of the inner right border establishes suspicion of beginning infiltration

Fig. 2.

physical examinations regarding the location, size, extent and character of lesion.

In this connection I will mention the case of a woman who was examined by Goldscheider and, because of an impairment, harsh breathing, together with a temporary failure of health, was advised to go to Switzerland and undergo a cure. Examination of this case at the Charitè showed under the X-ray the presence of large numbers of calcified glands which apparently had little to do with the woman's present condition, but explaining the cause of the sound impairment.

The X-ray, unfortunately, can never be universally applied, since its proper application requires special training and its findings are useless except in the hands of one capable of their translation. The radiograh, like the thermometer, furnishes evidence of an objective character. Slight differences in the apical percussion note are difficult to judge, especially in double lesions, in which cases the X-ray furnishes valuable confirmatory evidence.

Let us consider briefly those processes in the early stages of tubercuosis in which the X-ray can be of assistance. 1st. Infiltrations which involve a certain extent and possess a certain thickness are visible raidographically and fleuoroscopically. Beginning infiltrations are at times difficult to determine with the fleuoroscope, but are visible on the plate. 2nd. Simple catarrh of the smallest bronchioles is neither radiographically nor fleuoroscopically visible unless the air content of the lung is influenced thereby, this is especially the case in early tuberculosis (Fig. 2).

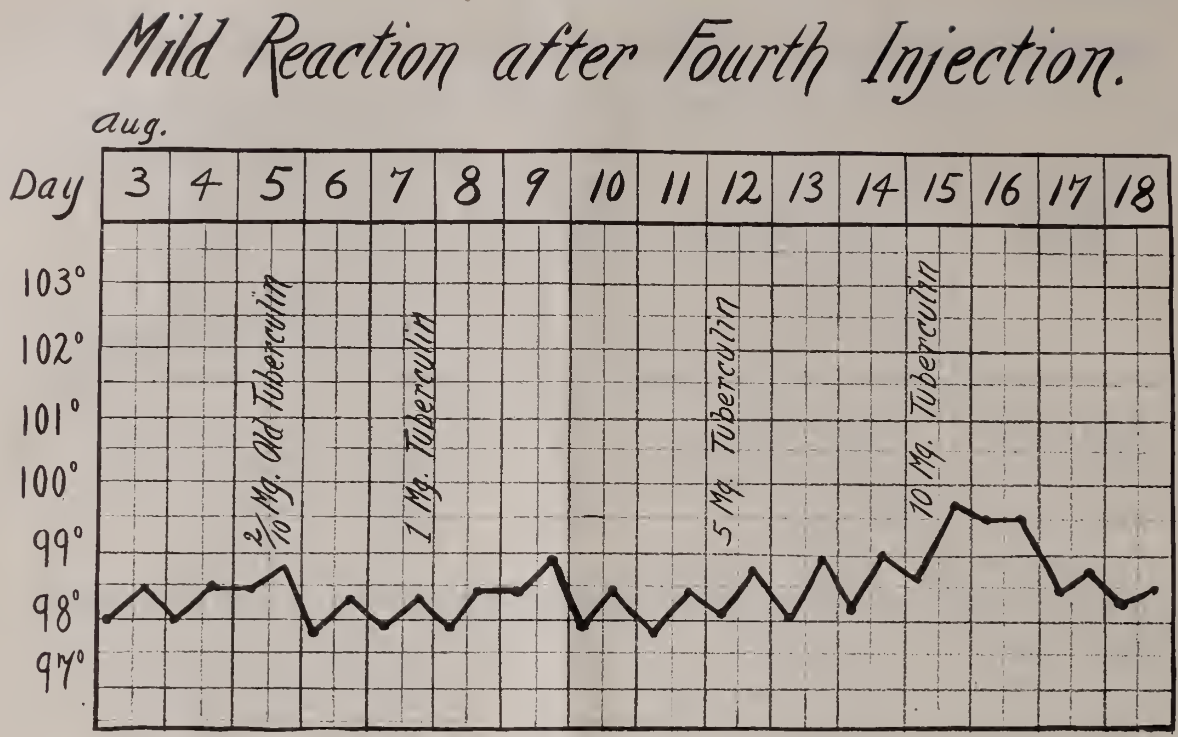


Fig. 3.

3rd. In consequence of apical catarrh a decreased air content of the lung apex soon follows. If it be unilateral by exact blending we are able to find a darkening of one apex. If the opacity be bilateral, great caution must be exercised in its interpretation since it may depend upon diminished air content commonly present in many persons leading sedentary lives or breathing superficially. In cases of bronchitis, obstruction atelectasis due to the absorption of air is common in the peripheral lung portions and may *persist* for long periods.

Freund has pointed to the constancy of calcification of the *costal* cartilage of the first rib. This, however, must be considered rather as a factor predisposing to tuberculosis. The same applies to a narrowing of the upper chest aperture which, according to Hansemann, is present in all typical cases of tuberculosis and all individuals presenting narrow openings sooner or later develop tuberculosis. The rib shadows are also to be observed. One often finds them lying strikingly near together, this being especially the case in *retractive* processes, exhibiting a narrowing of the Krönig field.

Williams has called atention to a limitation of movement of the diaphram on the affected side. This, however, as a constant sign of early tuberculosis I am unable to confirm, since I have repeatedly found it to be absent.

Specific Diagnostic Tuberculin Reactions.

Aside from the Wassermann reaction, probably no biologic test is of greater importance to the internist than the specific tuberculin reaction. However, it must be mentioned that these tests are not to be used except as valuable adjuncts to clinical procedures. As Max Wolf has said, any easily applied method for the certain determination of early tuberculosis would be almost as valuable as the specific. These tests are extensively employed in all the large medical clinics of Germany and Austria. In England the variation between the tuberculo-opsonic index before and after exercise is *erroneously* considered of value. Briefly three forms of tuberculin reaction need only be considered.

The Pirquet Cutaneous Reaction.—The cutaneous reaction owes its origin to the observation of Pirquet that on tuberculous children to whom tuberculin was applied to the abraided epithelial surface of the arm, a papule developed which in non-tuberculous children remained absent. It is interesting to note that all of Pirquet's cases coming to postmortem, reacting positively, showed unquestionable evidence of active tuberculosis. The test is specific and exceedinly delicate, fully 80 per cent. of all adults reacting, thus proving the frequency of tuberculosis. Unfortunately this simple test proves only in adults that the individual either *has or has had* tuberculosis, but gives no clue regarding the activity or inactivity of the process. The test is, therefore, employed *alone* only in children under 4 or 5 years of age, when a positive reaction would likely indicate an active process. A negative reaction is of value in the absence of cachectic conditions in eliminating tuberculosis.

Wolf-Eisner employs the Pirquet test at the same time and in connection with the conjunctival test, because of its prognostic value. If the cutaneous reaction remains longer than four days and is ac-

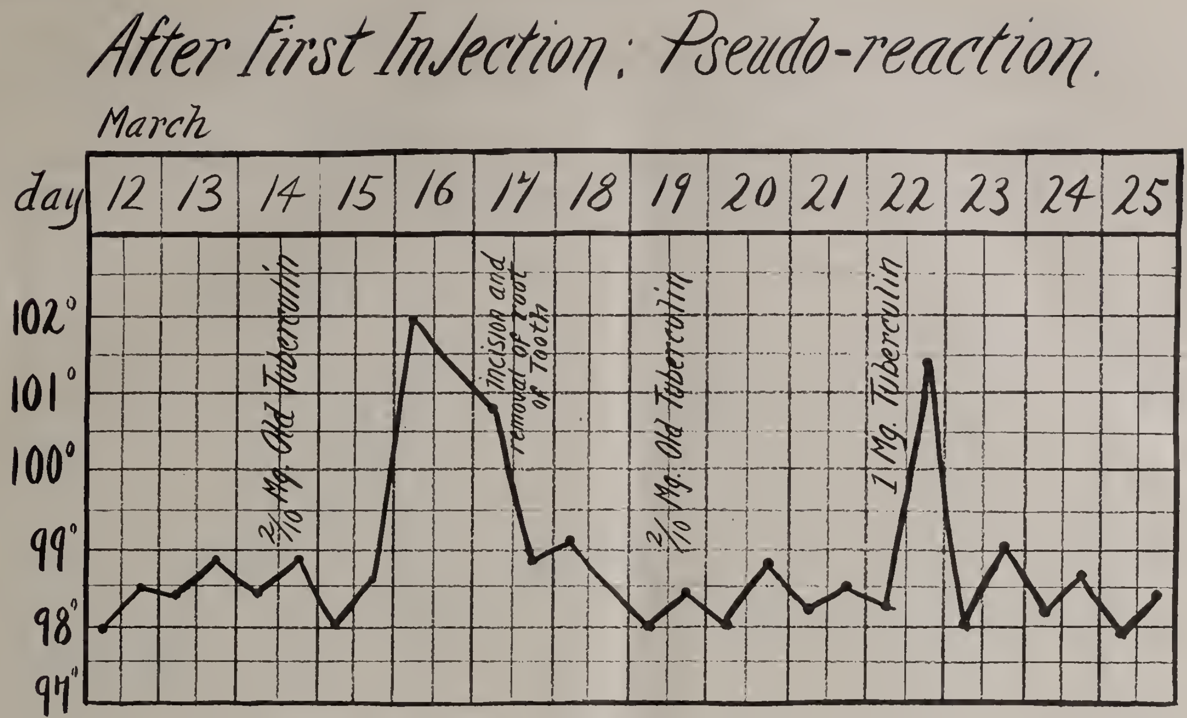


Fig. 4.

companied by induration, it forms the so-called *continuous reaction,* which may persist for even three or four weeks, after which a pigment spot remains for even a month. This so-called continuous reaction accompanied by induration, shows the ability of the organism to respond to tuberculin with connective tissue proliferation and it is reasonable to suppose that diseased focus would respond in a similar manner, and therein lies its prognostic value, since it has been repeatedly observed that pulmonary cases exhibiting this continuous form of reaction usually run a favorable course and respond to tuberculin therapy.

The Conjunctival Test.—In Germany, Wolf-Eisner is naturally a firm supporter of the eye reaction which, together with that of Calmette bears his name. This test is employed in many of the great medical clinics of Europe, notably that of Neusser, in Vienna, and Krause, in Berlin. The reaction is positive in active tuberculosis which is not too far advanced. Many observers claim positive conjunctival reactions in clinically healthy persons. Wolf-Eisner regards this class of cases as exceedingly suspicious, since subsequent developments have proven the presence of clinically active tuberculosis. The reaction is negative in inactive tuberculosis, because antibodies are present in sufficient quantities only in active lesions to respond to this test.

The conjunctival reaction is also of considerable prognostic value. A *negative reaction,* in the presence of manifest tuberculosis with tubercle bacilli in the sputum, justifies an unfavorable prognosis. A negative reaction may occasionally be observed when, because of great absorptive ability of the mucous membrane, the tuberculin solution is not permitted to act sufficiently long. In these cases a slight constitutional reaction has been observed. A positive conjunctival reaction indicates by no means a favorable prognosis, unless accompanied by the continuous form of cutaneous reaction already referred to.

The test is contraindicated in all diseases of the eye and this should be inquired into. Under no circumstances should the same eye be reinstalled. The objection has been raised to the conjunctival test that it renders the subject upon whom it has been applied unfit for tuberculin therapy, because of reoccurrence of the conjunctivitis with each subsequent injection of tuberculin. But, according to Wolf-Eisner, herein lies its advantage, since by the employment of small therapeutic doses this recurrence is never observed, and its occurrence is looked upon as a signal not to increase the size of the tuberculin dose.

Subcutaneous Tuberculin Reaction.—Despite all opposition this test enjoys great popularity, and is recommended by Wassermann in preference to all others. In the absence of contraindications, Wassermann employs this test in doses of 1, 3, 5, and 10 mg. (Fig. 3). He is never satisfied with a single reaction which may be simulated by accidental conditions (Fig. 4) (angina, ephemeral fever, constipation, etc.) , but brings about its reproduction in a very convincing manner, depending upon the fact that a person who has reacted slightly reacts for a second time in a typical manner upon a repetition of the same dose. And, if a marked reaction has followed any particular dose, its reproduction is brought about by the

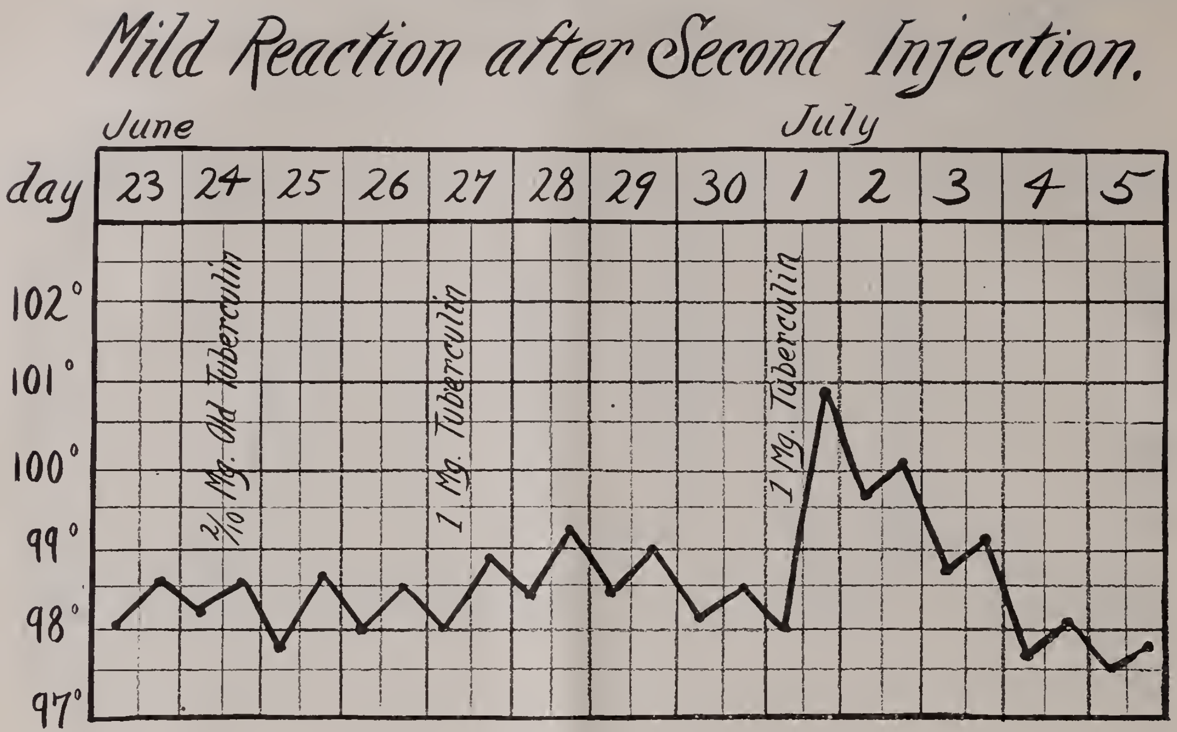


Fig. 5.

injection of a still smaller dose, one which was previously borne without effect. For instance, a slight febrile reaction follows the injection of the 5 mg. dose. The question arises, Is it accidental or specific? We can prove the specificity of this elevation if, after two or three days, we inject the 3 mg. dose which was previously ineffective but now results in a typical reaction (Fig. 5).

In connection with the subcutaneous reaction the so-called *focus reaction* at the site of disease must be mentioned. This reaction is exceedingly important and at times enables us to render a "topical diagnosis." The focus reaction is always to be searched for. It may consist of a little tenderness or swelling of the affected gland in tuberculous adenitis. In suspected pulmonary cases an apical pleuritic rub, a slight "soreness" or a few crackling rales, which on previous examination were absent, are convincing. Sputum may appear or, in cases where it is already present, an increase will be observed or even tubercle bacilli may for the first time be found.

The so-called *"Stich-reaction"* is also very important and consists of a reddened areola at the site and along the path of the needle puncture. This was formerly attributed to faulty asepsis, but this belief was erroneous since it never occurs in the absence of tuberculosis. More recently attention has been directed to the *intracutaneous reaction*, which test is readily applied by injecting minimal quantities of tuberculin intracutaneously, in a manner similar to that employed in cocain anesthesia. The blanching of the epidermis immediately follows when the technic is properly performed. The test is very sensitive, and a positive reaction at times follows the injection of 1/1,000,000 mg. of old tuberculin. This method is utilized not only to determine the patient's sensitiveness to tuberculin before the institution of specific treatment, but as a means of treating febrile cases, since it has been shown that constitutional reactions can be avoided and local antibody formation be brought about through the intracutaneous injection of these minimal quantities of tuberculin. The site of a previous injection is always examined and the dose is never increased until the reaction remains absent.

In conclusion, it should be stated that great caution should be exercised not only in the employment of the specific tuberculin tests, but in the selection of standard preparations.

1021 Corbett Bldg.

DISCUSSION.

Ralph Matson, Portland: The specific tuberculin tests have been widely received but somewhat severely criticised, especially the eye reaction. I have never seen any damage result from the eye test with the exception of one or two cases when, in the absence of the preparation of the tuberculin which I prefer to use, another grade was used. The X-ray may be successfully applied in interpreting suspicious physical findings.

E. A. Pierce, Portland: One question I wish to ask is, whether there is not some danger in the ordinary operator applying the eye test. I believe the von Pirquet test is so sensitive that it will react in arrested or healed lesions and, if these cases were subjected to vigorous treatment with tuberculin, an active process might be awakened and incalculable harm done the patient when he had been doing well enough.

R. W. Matson, in closing: The Pirquet test gives us no clue regarding the activity or inactivity of the process. The eye test, however, supplies the information. We employ the Pirquet test for its prognostic value. Damage to the eye following the eye test has been reported. This has never occurred in any of our cases and Wolf-Eisner has used the test in 4,000 cases with no ill consequences.

NORTHWEST MEDICINE
The Journal of the State Medical Associations of Oregon Washington, Idaho and Utah
Devoted to the Interests of the Medical Profession of the Pacific Northwest.

Editorial Office, 719-22 Cobb Building, Seattle, Wash.

JANUARY, 1911.

EDITORIAL

OUR RELATION TO THE UTAH STATE MEDICAL ASSOCIATION.

The Utah State Medical Association has completed arrangements with Northwest Medicine by which the latter will serve as its official journal for the ensuing year, sustaining to it the same relations which it bears to the three state associations of the Pacific Northwest. By thus bringing the profession of Utah into closer relations with the physicians of the other three states, we are sure mutual benefit will result to the practitioners of the four states. By the publication of the transactions and papers of the meetings of these state associations, the physicians of each state will be enabled to learn something of the personality and medical views of the profession in the other three. It is unusual for medical societies of different states to combine in joint meetings, so that only a few individuals, as a rule, who visit the other state meetings, come in contact with the brethren of adjacent states. In the absence of this personal relationship and its consequent advantages, a common official journal can to an extent serve as substitute. The management of this journal aims to accomplish this result as far as possible.

C. A. S.

CONFERENCE OF WASHINGTON HEALTH OFFICERS.

The conference of county and city health officers, which met in Seattle, Dec. 15 and 16, was a surprisingly interesting meeting in several senses. It was called by the state Commissioner of Health for the purpose of discussing the public health subjects upon which it might seem wise to ask legislative action during the coming session of the state legislature. Owing to the hasty arrangements it was not anticipated that the attendance would be large, but over forty health officers registered during the two days. The interest shown by all amounted to actual enthusiasm. There was constant sharp discussion. Everyone present had some ideas worth expressing and stated them in short, clear, expressive language. One of the most noteworthy features of the meeting was the strong sentiment that these conferences are working bodies and that all the time at the disposal of such a conference is precious. Thus, the only feature which partook of a social nature during the two days' session was the informal dinner held Wednesday evening and this, through the courtesy of the chief dairy instructor of the Seattle health department, was turned into an informal but lively symposium upon the important subject of municipal milk supplies.

The key note of the conference, running through practically every paper and every discussion, was emphasis upon the fact that we are yet only at the beginning in preventative medicine and sanitation in this state, that, although no thinking man will deny that human life and human health are more important than any material resources or public utilities, yet in practice the people of this state have done just the opposite up to the present time, and that much education is still necessary before the general public awakens to the possibilites of wise health administration. It was pointed out by more than one speaker that the spirit of the saying of the chief health officer of a middle western state, that "the people of the state spent dollars upon the health of hogs, where they spent dimes upon the health of humans," holds true in Washington today.

Dr. Wilson Johnston, president of the state board, acted as chairman of the conference. Representatives of all the larger cities were present, except Spokane and Vancouver. The banner county in point of attendance was Lincoln, which sent the county health officer and three city health officers. Chehalis County was a close second. Tuberculosis was the subject under discussion during the opening session, the central thought of the morning's discussion being the question of the state's duties in the handling of this problem. The question of general sanitation, particularly in regard to the public utilities of water supply, sewage and garbage disposal, occupied a long and most interesting afternoon session. The last day was devoted to contagious diseases, with special reference to the typhoid problem and school inspection. An inspection of the city health department, and of the offices and laboratory of the state board of health occupied the recesses between sessions. It was felt by all that such meetings as these are of incalcuable value to all interested in this greatest American problem—the preservation of the life and health of our people—and the conference, upon motion of Dr. Stiles, of Walla Walla, passed a series of resolution commending the work of the state board of health, and reiterating their belief that public health work should be extended many fold beyond its present scope, in order to reap the benefits that the application of our sanitary knowledge will furnish any community.

E. R. K.

PUBLIC IGNORANCE ON MEDICAL SUBJECTS.

The need of educating the public in relation to matters medical and surgical becomes more urgent as the reading of the daily papers becomes more nearly universal, with tendency of the news gatherers to print stuff that will attract interest regardless of strict adherence to facts.

It would seem that at the present time it is necessary for the newspaper reporter to be a man of encyclopedic range of knowledge. Since we have not, as a profession, been able as yet, to devise a way by which men of authority in the profession can present to the public the facts relative to new discoveries in medicine and surgery without the imputation of being advertisers, the editors of the lay press should, at least, submit articles dealing with these subjects to some member of the profession before their publication. Modern surgery does marvelous things, but has hardly advanced to the point some of the laity imagine. Only recently several intelligent people were heard discussing an article in which they had read that some surgeon had successfully removed the heart of an animal after severing the large vessels, and replaced it by suturing the vessels so that the animal lived. In another instance, in operating for a heart injury, the surgeon had brought the heart outside of the chest, it being held in the hands of the assisting nurse while some operation was performed.

Very recently there have been reports claiming the possibility of restoring amputated limbs by replacing them with those of persons killed suddenly, in good health. Much has been done through the press in warning the public against the many fake medical cures, but even yet, in the dreaded maladies like cancer and tuberculosis, the fakirs take advantage of the wonderful progress in medicine to claim new discoveries for the certain cure of these conditions and always find human sufferers ready to grasp at anything giving the faintest hope of relief. Physicians should, as far as possible, keep their own patients informed relative to these false claims. J. M. T.

THE ROSTER OF OUR STATE MEDICAL ASSOCIATIONS.

We desire to call attention to the annual roster of the four state associations of which Northwest Medicine is the official journal, which appear in this issue. These lists have been compiled by their respective secretaries, and are considered correct on the 1st of January. Any errors in names or addresses should be reported to the state secretaries. It is hoped the annual publication of these lists of members may prove of service to the profession of all the states. C. A. S.

REPORTS OF SOCIETY MEETINGS

UTAH STATE MEDICAL ASSOCIATION.

REPORT OF THE TRANSACTIONS OF THE SIXTEENTH ANNUAL MEETING OF THE UTAH STATE MEDICAL ASSOCIATION, SALT LAKE CITY, UTAH, OCT. 3-4, 1910.

House of Delegates.

Monday Morning, October 3.

The House of Delegates convened at 11 a. m., Dr. Joseph S. Richards in the chair. The meeting was called to order by the President. The roll was called, showing twelve members present.

The Secretary read a letter from George A. Simmons, secretary of the American Medical Association. On motion of Dr. L. W. Snow the communication was filed.

The Secretary announced that during the interval of last meeting of the association the bill creating a national health department came up for consideration in the Senate, and through the cooperation of Dr. Richards, the President of the State Association, Dr. John F. Critchlow, the President of the Salt Lake County Association, the following telegram was sent to Hon. Reed Smoot, U. S. Senate, Washington, D. C.:

"In view of the importance of Senate Bill 6049, a bill establishing a Department of Public Health and for other purposes, whose head shall have control over the various scattered bureaus dealing with the problems of public health, we respectfully ask our representatives in the Senate and Congress to give their individual and active support to the bill or any substitute bill that may be introduced that will result in the establishment of a Department of Public Health."

On motion of Dr. Condon the report was approved, and ordered published with the proceedings of the Association.

The Secretary announced that there was a communication from the publisher of the Denver Medical Times and the Utah Medical Journal offering to renew the understanding we had with them last year for the publication of the paper at the rate of one dollar per member, each member to be furnished with the journal.

Dr. Rich moved that the publication be left to a committee consisting of the councillors and the President and Secretary. Carried.

The Secretary announced that during last spring Dr. Behle, on account of sickness, went away and thought better to resign his position as councilor for the second district, and to fill the vacancy caused thereby the President appointed Dr. R. C. Smedley, of Salt Lake City, until the meeting of this association, and the President would like to have the support of the House of Delegates in that appointment.

On motion of Dr. Condon the appointment of Dr. Smedley by the President was confirmed.

The Chairman: We will now consider the recommendations of the Council.

Dr. Clift stated that at present one society is suspended, possibly through the inadvertence of its secretary in not collecting the dues from the members of the society and forwarding them to the Secretary. He believed, if the secretaries had an opportunity of meeting with the Council in April, he would then have set to work and collected the assessments and dues. The By-laws were passed when the society was meeting in

May, and in view of that meeting the date fixed for making these reports was May 1st, and now that the meeting had been altered to September, the date for making reports should be September 1st instead of May 1st.

Dr. Clift moved that the Medical Council be instructed to hold a meeting once in three months, and that they invite the secretary and treasurer of all county societies to meet with them about April in each year. Carried.

Dr. Clift: Our secretary has acted upon the idea that, instead of making these announcements on the first of May, he has postponed it until September. I think the Secretary should be relieved from the responsibility of acting contrary to the By-laws, by an instruction to the secretary that he send out these notices not later than September 1st instead of May 1st. Motion carried.

Dr. Clift read the following resolution passed by the Davis County Medical Society, Sept. 7, 1910:

"Resolved that this society urge the State Medical Association to formulate and put forth a Code of Ethics for the guidance of the physicians of the state of Utah in accordance with the Principles of Medical Ethics, of the American Medical Association, and that a copy of this be sent to the Secretary of the Utah State Medical Association to be brought before the House of Delegates of that Association at its next meeting."

The following resolution of the Davis County Medical Society was also read:

"Resolved that this Society—the Davis County Medical Society—go on record as favoring the division of fee between the physician and the surgeon or specialist, in case of referring patients or assisting during operations or consultations."

It being 12 o'clock, and some of the members having matters to attend to before the next session of the Association, on motion of Dr. Ewing an adjournment was taken until immediately after the afternoon session.

MONDAY AFTERNOON.

The House of Delegates reconvened at 4:45 p. m., Monday, Oct. 3, 1910, as per adjournment. The meeting was called to order by President Joseph S. Richards.

Dr. Clift: I move that this House of Delegates declare that the so-called division of fees and commissions between practitioners of medicine and surgery is, in the words of Article 4, Sec. 4, of the American Medical Association Principles of Ethics, "derogatory to professional character" and detrimental to the best interests of the profession; but that, where previous and proper services are rendered in the referred case by the referring practitioner, or where he shall render services in consultation or in conjunction with the surgeon or specialist, he shall receive such payment as shall be proportionate or commensurate with the service actually rendered, and that he should be protected and assisted by the surgeon or specialist in obtaining payment for such charges by same being made an item in the surgeon's or specialist's bill or account as rendered to the patient, which when paid in whole or part shall be divided pro rata among those who have taken part in the case.

In calling this to a vote I ask the Chairman to take a vote by yeas and nays. Motion seconded by Dr. Kahn.

The Chairman: The vote on the resolution is carried in the affirmative.

On motion the meeting was adjourned until Tuesday, Oct. 4, 1910, at 9 a. m.

TUESDAY MORNING, OCTOBER 4.

The House convened, as per adjournment, at 9:20 a. m., on Tuesday, Oct. 4, 1910, President Joseph S. Richards being in the chair.

The Chairman called the meeting to order and announced that the first business before the meeting was the election of officers and asked for nominations for President. Dr. Aird, of Provo, nominated Dr. Taylor, of Provo. A ballot was taken, resulting in the election of Dr. Taylor.

The Chairman called for nominations for First Vice-President. Dr. States nominated Dr. R. A. Pearse, of Brigham City, in the First Councillor District. A ballot was taken and Dr. Pearse was elected to the position.

The Chairman called for nominations for Second Vice-President. Dr. Snow nominated Dr. W. R. Tyndale, of Salt Lake, as Second Vice-President. Dr. Frederick Clift nominated Dr. Heber E. Robinson, of American Fork, as Vice-President for the Third District.

Dr. Rich moved that the rules be suspended and that the Secretary be instructed to cast the votes for Second and Third Vice-Presidents for Drs. W. R. Tyndale and Heber E. Robinson. Carried.

Secretary: The Secretary hereby casts the ballot of the House of Delegates for Dr. W. R. Tyndale as Second Vice-President and Dr. Heber E. Robinson as third Vice-President.

Dr. R. W. Fisher nominated Dr. W. Brown Ewing as Secretary. Dr. Snow moved that the nominations close and that the President cast the ballot for the Secretary. Carried.

Chairman: Dr. W. Brown Ewing is elected Secretary of the Association.

Dr. C. C. Snyder placed in nomination Dr. J. N. Harrison for the position of Treasurer. Dr. E. C. Rich moved that the Secretary be instructed to cast the vote for Dr J. N. Harrison as Treasurer of the Society. Carried.

Secretary: Under suspension of the rules, the Secretary hereby casts the ballot fo Dr. J. N. Harrison as Treasurer.

The Chairman announced that the election of one councilor was in order.

Secretary: Mr. President, as has been stated in the meeting here before, under the exigencies of the case the President appointed a councilor for the second district and was afterwards sustained by the meeting of the House of Delegates. I, therefore, make the nomination for the unexpired term of councilor for the second district of Dr. R. C. Smedley, continuing the appointment as made by the President. Carried.

The Chairman announced that nominations would be received for the Third Councilor district, to fill the position made vacant by the removal of Dr. Clift from the Third Councilor district.

Dr. Aird nominated Dr. Horace G. Merrill, of Provo. Dr. Clift nominated Dr. John W. Aird, of Provo.

A ballot was taken, which resulted in the election of Dr. Horace G. Merrill to the position of councilor from the third district.

The Chairman announced that there was some unfinished business to take up.

Dr. Frederick Clift, continuing the report of the Council, stated that the Council recommended that the assessment of the members of the State Medical Association be increased to the extent of one dollar per year per member, and that this amount be set aside as a special fund for the prosecution of medical frauds, fakirs and illegal practitioners of medicine, and that this fund be used for such purposes as and when required at the discretion of the Council, of the State Medical Association. Dr. Clift moved that this be done in accordance with the recommendation of the Council.

The matter was then discussed, but no definite action had been taken when the meeting adjourned at 10:25 a. m. till the call of the chair.

TUESDAY AFTERNOON.

The House of Delegates reconvened at 3 p. m., Dr. Frederick Clift in the chair.

The Chairman announced that the question before the house is that of an additional assessment of one dollar per member per year, for the purpose of securing a fund for the prosecution of illegal practitioners of medicine, frauds, etc., that a motion was before the house to make that additional assessment. Dr. R. R. Hampton seconded the motion.

Dr. J. C. Robinson moved to amend the motion by saying "One dollar or more."

Dr. S. Ewing moved that the motion be laid on the table. Carried.

The Chairman stated that the Council had long felt that the profession should have some voice in the nomination of the State Board of Medical Examiners, and recommended that steps be taken to that end. Dr. S. Ewing moved the adoption of that recommendation. Carried.

The Chairman: In view of the fact that the American Medical Association has arranged in its program for the annual meeting, for the holding of a special session at which the presence of the secretaries of the various state associations is requested, the Council recommended that arrangements be made for the attendance of the Secretary of the Utah State Medical Association at the next annual meeting of the A. M. A. at Los Angeles, and that this recommendation be limited to the forthcoming meeting at Los Angeles.

Dr. R. R. Hampton moved that the recommendation of the Council be adopted. Dr. A. S. Condon moved an amendment to the motion, that the expense be limited to transportation, including Pullman and meals, to Los Angeles and return. Carried.

The Chairman announced that the next business before the house was the selection of a place at which to hold the next meeting of the Association. Dr. S. Ewing moved that the Association hold its next meeting in Salt Lake City. Carried.

Chairman: There is still another matter to bring before the House, that is, that each councilor shall make an annual report of his work and the condition of the profession in his county, at the annual session of the House of Delegates.

As councilor for the third district, Dr. Clift presented his report. On motion of Dr. A. S. Condon the report was received and filed.

The Chairman called for the report of the councilor from the first district. Not present.

The Chairman called for the report of the councilor from the second district. Not present.

Dr. J. W. Aird moved that a copy of the resolution regarding the regulation of fees be sent to every member of the profession in this State. Carried.

On motion of Dr. J. W. Aird the House of Delegates adjourned (at 3:45 p. m.)

The Council met at 5:10 p. m. and elected Dr. R. S. Joyce, of Ogden, as Chairman, and Dr. W. Brown Ewing as Secretary. Meeting adjourned.

Treasurer's Report.

Report of Treasurer of the Utah State Medical Association for the year ending Oct. 3, 1910. The receipts and disbursements are respectfully submitted as follows:

To balance on hand as reported at last meeting		$ 498.62
Salt Lake County Medical Society		324.00
Utah County Medical Society		74.00
Ogden County Medical Society		95.00
Davis County Medical Society		21.00
Cache County Medical Society		78.00
San Pete County Medical Society		....
Miscellaneous		21.00
		$1,111.62
Expenditures to date:		
1909.		
Sept. 27—W. Brown Ewing, services at secretary		$ 125.00
Oct. 7—John A. Stimson, final adjustment, Utah State Medical Association with Denver Medical Times		50.00
Oct. 19—F. W. Gardiner Co., 300 programs		15.00
Oct. 21—T. A. Flood, stenographic and typewriting report		75.00
Nov. 19—Janitor's service at Ogden meeting		3.15
1910.		
Jan. 7—Paid Denver Medical Times for 1909 and 1910		178.15
Jan. 12—Richards, Richards & Ferry—Legislation		50.00
Jan. 12—Benner X. Smith—Legislation		10.00
April 29—W. Brown Ewing:		
Express Charges	$ .25	
Typewriting	1.50	
Telegrams	4.60	
Postage	2.00	8.35
Oct. F. W. Gardiner Co., 250 Letterheads		2.25
Oct. Stamped Envelopes and Letterheads for Secretary		15.50
Total Expenditures		$ 532.40
Balance on Hand		579.22
		$1,111.62

JAMES N. HARRISON, Treasurer.
Treasurer.

SCIENTIFIC PROGRAM.

MONDAY MORNING, OCTOBER 3.

The sixteenth annual meeting of the Utah State Medical Association convened at the Council Chamber, City and County Building, Salt Lake City, Utah, Monday, Oct. 3, 1910, at 10 a. m., President Joseph S. Richards in the chair.

The meeting was called to order by the President. The Chairman requested the members from outside of the city who wished to attend the banquet to hand in their names so that preparations could be made for the required number.

The Chairman also announce that Mrs. L. W. Snow and Mrs. Fred Stauffer request the pleasure of the ladies of the members at a reception to be held at the Stauffer Apartments, from 2 until 5 p. m., on Monday, Oct. 3.

The Chairman they called for the report of the Committee on Scientific Work. Not present.

Report of Committee on Public Policy and Legislation. No report.

Committee on Necrology. Dr. L. W. Snow made the following report:

Your committee on necrology beg to report as follows: During the past year there has been one death among our members. Dr. Joseph Milleron of Salt Lake City.

Dr. Milleron was born Oct. 4, 1844, in Ohio. He served during the civil war and was honorably discharged at the close of the war in May, 1865. He graduated at the Chicago Medical College in 1869 and practised his profession in southern Illinois until 1891, when he came to Utah. He made many warm friends in Salt Lake City, where he practised till the time of his death, April 22, 1910.

He was a kind-hearted, faithful physician and left many appreciative patients.

L. W. Snow.
S. Ewing.

The Chairman called for the report of the Council, and Dr. Frederic Clift, Chairman of the Council, made the following report, which was received and filed.

Report of the Council.

In pursuance of Chapter VII., Sec. 2, of the By-laws, I beg to report that there has been no material change in the condition of affairs in the third district, from the medical standpoint, since my last report. It will be remembered that, in consequence of the regrettable accident which brought our meeting in Ogden to a premature close, all businss not absolutely urgent was laid on the table until the next annual meeting.

There was a matter to which I desired to call your attention at that time, in regard to members of the profession who had joined a society in the second district. By Chapter IX., Sec. 9, a physician living near a county line may hold his membership in that county most convenient for him to attend on permission of the component society in whose jurisdiction he resides. Adapting this rule to district societies, a physician living near the district line would have to obtain permission from the district in which he resides before being allowed to join a society in another distirct. The question is of some importance as it forms one of the obstacles to the organization of a society for Juab County. There are some ten members of our profession located in that county, some of whom are members of the Utah County Society, while others belong to the Salt Lake Society. It is self-evident that these should join hands and form a Juab County Society, but it is said that those belonging to the Salt Lake Society prefer to attend the Salt Lake meetings and as a result the efforts to organize a society for Juab must fail.

The San Pete Society has issued a very attractive program of work but, in consequence of the members being scattered over a wide extent of country, it is almost impossible to depend upon a quorum being present at the stated meetings. The society has lost one of its moving spirits in the person of Dr. W. W. Woodring, but I trust that the younger men coming into the field will take up the work with renewed vim and keep the society in good standing.

The Utah County Society maintains its position both in regard to numbers and the efforts put forth to promote the public good. In April a banquet and public meeting was arranged by the society, at the request of the ladies clubs of Provo. The papers on health problems, including one on "Fletcherism," were appreciated by a thoroughly representative gathering.

The Third Councilor District Society held its third annual meeting at Lehi, on the 8th of January last and provided the scientific program for two public meetings, held in the Tabernacle, where there was a full attendance of both ladies and gentlemen. The subject presented for consideration was that of "Health Conservation in the Home and the School." Resolutions favoring a safe and sane Fourth of July were presented and had much to do with the passage of ordinances which prohibited the sale and use of dangerous explosives throughout Utah County.

Respectfully submitted,
Frederic Clift,
Councillor Third Medical District.

3rd October, 1910.

The Chairman called for the minutes of the previous meeting. On motion of Dr. Frederic Clift, in accordance with the condition prevailing at the previous meeting, the minutes were taken and accepted as printed in the proceedings of the Association, and in order to save time the reading of the minutes was dispensed with. Carried.

Dr. E. W. Whitney, Chairman of Committee on Arrangements, reported that arrangements had been made with the La Vista Theatre, 228 State Street, for Dr. Carroll Edson's lecture, with stereopticon views, on the subject of "Painting and the History of Medicine," and that the lecture would be given at 12 noon on Tuesday, Oct. 4. The report of the Chairman was accepted.

Dr. Stauffer, as Chairman of the Committee on Entertainment for the ladies of the members of the Association, announced that a reception would be given on the afternoon of Monday, the 3rd, at the Stauffer Apartments, 84 East South Temple Street, from 2 until 5. For Tuesday at 12 noon an organ recital at the Tabernacle had been arranged for, and after the recital a luncheon at the Commercial Club. After the lunch an automobile ride would be taken.

There being no other business before the meeting, the Chairman requested all members of the House of Delegates who were present to meet in the adjoining room. On motion, the meeting was adjourned until 2 p. m.

Monday Afternoon.

The Association convened Monday, Oct. 3, 1910, at 2:15 p. m. The Chairman called the meeting to order.

President's Address. Dr. Joseph S. Richards, President of the Association, read this address.

Neurasthenia Gastrica. (Nervous Dyspepsia of Laube.) Dr. Alf. A. Robinson, of Ogden, read this paper, which was discussed by Drs. R. L. Gillespie, of Portland, Ore.; Frederic Clift, Farmington; R. S. Joyce, Ogden.

Some Legal Follies Concerning Medical Practitioners. This paper was prepared by Dr. J. C. Robinson, Cedar City. In his absence it was read by Dr. Woodruff.

Colon Bacillus Infection of the Urinary Tract. This paper was read by Dr. Charles B. Lyman, Denver, Col. It was discussed by Drs. R. S. Joyce, Ogden; F. S. Bascom; Ralph T. Richards, Salt Lake.

Malaria in Utah. Dr. Clarence M. Clark, Provo, read this paper, which was discussed by Drs. H. G. Merrill, Provo; Union Worthington, Salt Lake; Pike. St. George; Frederic Clift, Farmington; C. E. Edson, Denver, Col.

TUESDAY MORNING, OCTOBER 4.

Insect Bites. Was read by Dr. R. A. Pearse, Brigham City. It was discussed by Dr. E. C. Rich, Ogden.

Health Conservation. What Medicine Has Done and What it Will Do in the Future. This was read by Dr. G. F. States, Franklin, Idaho. It was discussed by Dr. T. B. Beatty, Salt Lake City.

Needed Legislation. Dr. D. C. Budge, Logan, read this paper.

Painting and the History of Medicine. This paper was given by Dr. C. E. Edson, Denver, in the La Vista Theatre, illustrated by lantern slides.

TUESDAY AFTERNOON

The Consideration and Importance of Early Recognition of Erysipelas. This paper was read by Dr. Heber E. Robinson, American Fork.

Anterior Poliomyelitis. This paper was read by Dr. R. L. Gillespie, Portland, Ore. It was discussed by Drs. Snow, Salt Lake City; S. L. Richards; S. C. Baldwin, Salt Lake City.

Laboratory Methods in the Diagnosis of Syphilis. Dr. Clarence Snow, Salt Lake City, read this paper.

Extra-Uterine Pregnancy. Was read by Dr. E. C. Rich, Ogden.

Blood Pressure, Arteriosclerosis and Therapeutic Indications. Was read by Dr. A. J. Ridges, Salt Lake City.

Chairman: That completes the program as we have it. All the papers have been read. The next order of business is to receive the report of the House of Delegates.

Secretary: Coming through the hands of the Councilors of the three districts, the following resolution has been passed by the House of Delegates, stating that the Council has decided to refer the foregoing resolution to the House of Delegates with the recommendation that the previous and proper charges in connection with referred cases for services rendered by a referring practitioner of medicine in that particular case should in all cases be provided for by being set out and stated as an item on the face of the bill or account rendered by the specialist or surgeon.

Chairman: During the session of the House of Delegates this morning, as provided for by the Constitution, the following officers were elected:

President: Dr. Fred W. Taylor, Provo, Utah.

First Vice-President: Dr. R. A. Pearse, Brigham City.

Second Vice-President: Dr. W. R. Tyndale, Salt Lake City.

Third Vice-President: Dr. Heber C. Robinson, American Fork.

Secretary: Dr. W. Brown Ewing, Salt Lake City.

Treasurer: Dr. J. N. Harrison, Salt Lake City.

Councilor for the Second Councilor District, to fill the unexpired term of Dr. A. C. Behle, resigned, Dr. R. C. Smedley, Salt Lake City.

Councilor for the Third District, to fill the position made vacant by the removal of Dr. Frederic Clift, resulted in the election of Dr. Horace G. Merrill, of Provo.

Chairman: That ends the business of this session. If any members have any business to propose, or anything to bring before the Association, we would be glad to hear from them.

Dr. S. C. Baldwin: I understand that a newspaper has requested a copy of Dr. Budge's paper of this morning for publication. He does not want to give it to them without the sanction of the Association, and would like some action taken on it. I move that Dr. Budge's paper be given to the press for publication.

Secretary: Before this motion is put I would like to make one point, that it has been the history of our Association, at least since I have been the Secretary, that every paper that has gotten into the hands of the lay press has never been returned, and if those papers are lost they cannot be published, of course, with the proceedings of the Association, and I would like the mover of that motion to stipulate some way by which the Secretary can get hold of it if it goes to the lay press. We never have been able to do so in the past. Some of them have gotten out and are still out, and I personally don't want to be responsible for the paper, and cannot be responsible for it if it gets into the hands of the reporters for the lay press.

Dr. S. C. Baldwin: I would move as an amendment to the motion that if this is passed by an affirmative vote, that the doctor shall furnish the press with an additional copy and that the Secretary retain the copy belonging to the Association.

Dr. A. A. Kerr: I move that Dr. Budge be permitted to give a substitute copy of his paper to the press for publication. Motion carried.

Chairman: I think there is a very important matter, I believe the paper was read today in this house, that if it would get before the public it would be a very desirable thing to do. I do not think it ought to be published in our local papers only. I think it ought to reach one of the national papers, one of the magazines, where it will be read by every American, and that is the paper written by Dr. G. W. States on the subject of "Health Conservation." I think if it could be arranged to reach one of the magazines it is important enough to do so. If it was published in one of the popular magazines I believe it would do a lot of good.

Dr. A. A. Kerr: I move that the President appoint a committee of three to select the best method of having published Dr. States' paper on "Health Conservation." Carried.

The Chairman appointed Drs. A. A. Kerr, C. G. Plummer and ———— as the committee.

Dr. R. W. Fisher conducted to the chair Dr. Fred W. Taylor, the President-elect of the Association.

The Association called for a speech, to which Dr. Taylor responded as follows:

"Gentlemen, I cannot express to you the feelings that I have on receiving your vote for the presidency during the next year. I am not egotistical enough to think that this is in any way due to any personal merit, and I recognize it as a geographical expediency on your part. However, I will do the best that I can and will try to serve you faithfully. The Association to me is very dear, and in the past I have always worked to the best of my ability to further medical science in Utah. I believe I had the honor of being one of the charter members of this Association, and I am proud to say that I am still a boy. The officers of the Association, I believe, have always taken the position that they are simply the servants of the Association, and not the masters, and I can assure you as far as my influence goes, that precedent which has been established will still hold. Another point is that the officers are absolutely helpless to make the Association a success without the individual support of every member of the Utah State Medical Association. We expect to begin next year's program tomorrow morning, and we shall call on each of you to begin your year's work, Oct. 5, 1910, for the meeting that shall be held Oct. 3, 1911.

On motion the meeting was adjourned.

WASHINGTON.

KING COUNTY MEDICAL SOCIETY.

Pres., P. W. Willis, M. D.; Secty., John Hunt, M. D.

The first regular bi-monthly meeting of King County Medical Society was held in the assembly room of the Seattle Chamber of Commerce, December 5, 1910, about 115 members being present. The meeting was called to order by President Willis at 8:05 p. m. The minutes of the previous meeting were then read and approved. President Willis announced that the program committee, acting with the program committee of Pierce County Medical Society, has arranged to have the papers of the evening given by members of the Pierce County Society, and in return the program at the meeting of the Pierce County Society, tomorrow evening, would be given by members of the King County Society; and urged the members to try and attend that meeting tomorrow evening at Tacoma.

Clinical Case.

Acute Unilateral Nephritic Blood Infection. Read by F. W. Rinkenberger, of Tacoma. Synopsis: Literature contains very little upon this subject. Symptoms are not well defined. Liability to be mistaken for other intra-abdominal conditions, as cholecystitis, appendicitis or peritonitis. Pathology, history of case, operation, nephrectomy and recovery. This paper was discussed by J. B. Eagleson, E. P. Fick, E. O. Jones, Dr. Brown and F. W. Rinkenberger.

Papers.

Some Disputed Points of Child Surgery. Read by Edward A. Rich, of Tacoma. Synopsis: Deadly operating zones of the first years of child life. Radical operations on children, hernia, etc. The time to operate on the various congenital deformities. Fallacies of cleft palate work. Successes and failures of the modern orthopedist. The prospective child surgeon. This paper was discussed by F. J. Fassett, J. B. Eagleson and E. A. Rich.

Tuberculosis and Tuberculin Therapy. Read by Joseph F. Griggs, of Tacoma. Synopsis: Tuberculosis vs. Consumption. The prevailing revision of thought which obtains regarding physical diagnosis and symptomotology. Status of the tuberculin tests. Management of tuberculosis by the practitioner in the home, with the benefits of the sanatorium treatment, without its disadvantages. Some phases of neglected medical treatment. Tuberculin therapy, conclusions. This paper was discussed by H. E. Coe, E. P. Fick, H. J. Davidson and J. F. Griggs.

The proposed amendments to the By-Laws were read the second time.

H. J. Davidson made a motion that the President appoint a committee of three for the purpose of taking the amendments under consideration and to report at the next meeting. Motion was seconded and carried.

The following were elected to membership: G. W. Beeler and C. W. Silverberg, of Seattle. Applications of the following were read and referred to the board of trustees: C. E. Wardell, of Seattle, and George W. Davis, of Kirkland.

A petition, signed by C. A. Smith, S. J. Holmes, J. B. Eagleson, D. M. Stone, G. W. Newlands, T. W. Sloan, W. A. Shannon and J. Shannon was read by the Secretary. The members signing asked to be transferred from the list of honorary members to the list of active members. M. G. Sturgis made a motion that the petition be accepted. Seconded by J. H. Lyons, and carried.

The following on the death of J. J. Smith, of Enumclaw, were read.

Whereas, it has pleased the Almighty, in His infinite wisdom, to call from our midst our beloved brother and fellow practitioner, J. James Smith, of Enumclaw, Washington; be it therefore,

Resolved, That the King County Medical Society hereby express their deep regret for the loss they have sustained, and extend their heartfelt sympathy to the family of the deceased. That a copy of these resolutions be spread upon the minutes of the society and a copy thereof forwarded to the bereaved family.

Signed on behalf of the King County Medical Society.

Earnest L. Bickford
D. A. Mitchell.
A. F. Edwards.
Com. on Resolutions.

Seattle, Washington,
December 5, 1910.

The second regular semi-monthly meeting of the society was held December 19, with President Willis in the chair, about 135 members being present.

Clinical Case.

Subdeltoid Bursitis. C. F. Davidson reported this case, the injury being from a fall and striking on the shoulder. The patient was unable to raise his arm above the horizontal, but had improved somewhat of late. The doctor gave a discussion of the pathology and treatment of this condition, which was illustrated by blackboard drawings.

Paper.

President's Annual Address. President P. W. Willis read this address, covering the work of the society during the past year, going into detail of some of the special work which it had accomplished. He also described in a brief manner the work done by the society for the benefit of the public and the profession at large during its previous history. He referred to the work of the committee during the past year, and outlined the possibilities of work along these lines.

The amendments to the by-laws, which had been read at two previous meetings, were taken up for discussion. All were accepted except one, which raised the dues of the society to $12 per year. In place of this, an amendment was adopted raising them to $6 per year.

Nominations were made for the officers for the ensuing year, together with nominations for the House of Delegates of the State Association.

The following were elected to membership in the society: J. T. Dawson, H. S. McGee and C. E. Wardell.

The banquet committee announced the annual banquet would be held the latter part of the first week in January.

SPOKANE COUNTY MEDICAL SOCIETY.

Pres., H. B., Luhn, M. D.; Secy., Carroll Smith, M. D.

The semi-monthly meeting of the Spokane County Medical Society was held Thursday, November 17, at 8 p. m., in the Hyde Building, President Luhn presiding. Forty-five doctors were present. The following physicians were present from out of town: R. C. Coffey, Portland Ore.; H. W. Carithers, Moscow, Idaho; Joseph Aspray, Moscow, Idaho; F. Epplen, St. Joe, Idaho; D. D. Drennan, Rathdrum, Idaho.

PAPERS.

The Surgical Treatment of Ulcers of the Stomach, other than Pyloric and Duodenal Ulcers. This paper, by Dr. R. C. Coffey, constituted the evening's program. This was the paper read by Dr. Coffey at the Oregon State Medical Association meeting last summer. It was profusely illustrated with drawings and charts and was conceded by all present to have been the most able paper on that subject ever presented to the society. It was discussed by Drs. Neff, Carithers, Wheeler, A. C. Johnson, Luhn and Coffey.

The regular monthly meeting of the society was held Thursday, December 1, in the offices of Dr. Kalb in the Hyde Block, President Luhn presiding. Thirty-five doctors were in attendance.

PAPERS.

Medical Legislation. Dr. J. R. Yocom, of Tacoma, addressed the society on this subject. He thought it best not to try to define osteopathy and the other different cults in the state law. He considered a mixed examining board, as we now have, better for the protection of the public than to have separate boards for the different cults and advised letting the present law alone for the time being.

He approved the Grave's bill on medical expert testimony. He advocated a change in the Criminal Abortion Act so that the woman would be immune from prosecution rather than being incriminated in giving the necessary testimony; and advocated that the sanitary control of the streams and waterways be given to the State Board of Health, logging and lumber camps and the oyster beds to also come under this head.

The sending of the City and County Health Officers to an annual meeting was recommended and their attendance was to be made compulsory, adequate compensation being given them by the cities and counties. He recommended that the state be divided in three districts, each supervised by a deputy health commissioner, working under the State Health Commissioner. The State Board of Health wants an increase of 50 per cent. of the last appropriation and he urged the society to work for the increase. He urged the compulsory reporting by the physicians of all cases of tuberculosis to the health department, also the reporting to the health department by tuberculosis victims of their removal from one house to another, so that the house could be fumigated before another party moved in.

Of the 21,000 deaths in this state in the last two years 2,100, or 10 per cent, were due to accidental violence. This percentage of deaths, due to accidental violence, exceeds that of any other state in the Union, and of any civilized country of Europe where records are kept. He believed 50 per cent. were preventable and spoke of an Employer's Liability Law the legislative committee of the State Association was now working on, modeled after the one in effect in Germany.

The address was discussed by Drs. Luhn, Brown, Potter, Grieve, Baker, Libby, Marshall, Power and Legislator Stevens. The society went on record as approving all the points advocated by Dr. Yocom. A rising vote of thanks was given the doctor for visiting the society and favoring us with his able address.

A motion to hold the annual banquet of the society during the month, and that the President appoint a banquet committee of five, carried. President Luhn appointed the following committee: Drs. John R. Sinks, G. W. Libby, E. R. Northrup, Frank Hinman, Carroll Smith.

The physicians of Spokane and the Inland Empire gathered together in the Hall of the Doges, Davenport's, Tuesday evening, December 20, for the third annual banquet of the Spokane County Medical Society. More than one hundred attended and everyone pronounced it the best one the society ever had. Dietetics were furnished with a seven-course dinner. Selections by the "Moose Quartet" and an orchestra were given throughout the dinner. The programs were unusually attractive.

Verbal treatments for the betterment of the profession, legislatively, executively, fraternally and socially, were discussed in well chosen and witty speeches. President H. B. Luhn was toastmaster and toasted some of the toasters a little more than well done.

Chronicles of the Spokane County Medical Society was the subject of Dr. W. W. Potter's toast. He gave a brief review, using the literary style of the Holy Writ, of the history of the society from its inception, 22 years ago, with 13 members, to the present time with 162 members.

Dr. Park Weed Willis, President King County Medical Society, responded to the subject, **Medicine in the Northwest,** and impressed the society that he should have been a comedian rather than a physician.

Ex-Senator George Turner was the guest of honor and gave a short address.

Dr. E. D. Olmsted's subject was **The Physician in Public Affairs.** He advised the physician early to take an interest in the ward and precinct affairs and said we, as a body, were too lax in political interests.

Attorney E. J. Cannon spoke on **Law and Medicine—Where the Roads Meet.** His speech was very interesting and humorous. He urged the society to support a measure which would establish a board of medical examiners to testify as experts in the courts.

Dr. Wilson Johnston spoke on **The Advantages and Benefits of Medical Societies.** Banquets seemed to him to be one of its chief advantages, thus establishing a better fellowship.

Medical Legislation was what State Senator Harry Rosenhaupt spoke on. He has always been one of the best friends of the profession in the legislature and assured us of his continued support.

The Physician's Responsibility to Society was very ably handled by Dr. X. L. Anthony. He spoke chiefly of the work of the Spokane Society of Social and Moral Hygiene, and explained how it was carrying on a campaign to encourage the parents to teach children the truth about sex and sex matters.

The last toast was by Dr. W. T. Williamson, or Portland, who delivered the best talk of the evening. **Fraternalism in Medicine** was his subject. He said, "Never believe what a patient tells you to the detriment of a brother even though you may think it may be true."

The following doctors from out of the city attended the banquet: Drs. R. D. Wiswall, Vancouver, Wash.; Park Weed Willis, Seattle, Wash.; W. W. Carithers, Moscow, Idaho; F. Epplen, St. Joe, Idaho; D. D. Drennan, Rathdrum, Idaho; E. T. Hein, Palouse, Wash.; Lee Ganson, Odessa, Wash.; J. E. Else, Pullman, Wash.; W. T. Williamson, Portland, Ore.

OFFICERS, COMMITTEES AND MEMBERS OF THE MEDICAL ASSOCIATIONS OF THE PACIFIC NORTHWEST FOR 1910-1911.

OREGON.

General Officers: President, F. W. Van Dyke, Grants Pass; First Vice-President, R. C. Yenney, Portland; Second Vice President, S. F. Dirklater, Hillsboro; Third Vice-President, C. G. Patterson, Baker City; Secretary, Calvin S. White, Portland; Treasurer, Katherine C. Marion, Portland.

Councilors: W. J. May, Baker City, term expires 1911; A. C. Smith, Portland, terms expires 1911; C. J. Smith, Pendleton, term expires 1011; E. J. Labbee, Portland, term expires 1912; W. T. Williamson, Portland, term expires 1913; S. T. Linklater, Hillsboro, term expires 1913; Calvin S. White, Portland, term expires 1914; William House, Portland, term expires 1915; Noble Wiley Jones, Portland, term expires 1915.

Journal Trustees: W. T. Williamson, Portland; C. J. Smith, Pendleton; K. A. J. Mackenzie, Portland.

MEMBERS OF THE OREGON ASSOCIATION AND OFFICERS OF THE COMPONENT SOCIETIES.

The following list includes the members of the county societies who were in good standing in the State Medical Association, January 1, 1910:

BAKER COUNTY MEDICAL SOCIETY.

President, J. P. Hayes; Secretary, C. O. Patterson.

Barton, C. E., Baker City.
Dean, C. J., Baker City.
Dodson, O., Baker City.
Hayes, J. P., Baker City.
Higgins, T. J., Baker City.
Huff, J. W., Baker City.
Ison, V. S., Baker City.
Parker, W. L., Baker City.
Patterson, C. O., Baker City.
Pierce, C. E., Baker City.
Trueblood, W. A., Baker City.

CENTRAL WILLAMETTE MEDICAL SOCIETY.

President, W. H. Dale; Secretary, H. J. Cavanaugh.

Bennett, E., Monroe.
Booth, A. H., Lebanon.
Booth, J. C., Lebanon.
Cathey, B. A., Corvallis.
Cavanaugh, H. J., Albany.
Dale, W. H., Harrisburg.
Doris, W. H., Albany.
Ellis, M. H., Albany.
Farra, G. R., Corvallis.
Johnson, W. T., Corvallis.
Loggan, R. G., Philomath.
Luther, N. R., Sweet Home.
Newth, A. G., Philomath.
Pernot, H. S., Corvallis.
Prill, A. G., Scio.
Rowley, W. T., Corvallis.
Wallace, B. R., Albany.

CLATSOP COUNTY MEDICAL SOCIETY.

President, R. J. Pilkington; Secretary, ———

Estes, O. B., Astoria.
Fulton, J. A., Astoria.
Kinney, A. M., Astoria.
Kinney, Alfred, Astoria.
Finch, A. A., Astoria.
Holt, J. M., Astoria.
Henderson, H. L., Astoria.
Lewis, W. E., Seaside.
Pilkington, R. J., Astoria
Tuttle, J., Astoria.
Vernon, Nellie S., Astoria.

COOS AND CURRY COUNTIES MEDICAL SOCIETY.

President, Walter Culin; Secretary, E. Mingus.

Culin, Walter, Coquille.
Dix, G. E., Marshfield.
Houseworth, A. L., Marshfield.
Houston, H. L., Bandon.
Johnson, L. G., Myrtle Point.
McCormick, J. T., Marshfield.
Mingus, E., Marshfield.
Richmond, J., Coquille.
Stemmler, J. O., Myrtle Point.
Straw, E. E., Marshfield.

CROOK COUNTY MEDICAL SOCIETY.

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Coe, U. C., Bend.
Edwards, C. S., Prineville.
Rosenberg, J. R., Prineville.
Snook, W. H., Prineville.

EASTERN OREGON DISTRICT MEDICAL SOCIETY.

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Barnes, E. W., North Powder.
Biggers, G. L., La Grande.
Beers, H. E., Wasco.
Blakeslee, L. K., Pendleton.
Bronson, Malcolm, Hood River.
Chilton, L. W., Canyon City.
Cromwell, I. M., Union.
Cole, W. G., Pendleton.
Coe, H. W., Stanfield.
Doane, O. D., The Dalles.
Dodson, Z. T., Clevelands, Wn.
Dorn, F. A., Echo.
Denman, H., Harriman.

Douglas, W. J., Halfway.
Douglas, G. H., Jordan Valley.
Dutro, E. O., Hood River.
Elwood, J. L., Tygh Valley.
Geary, J. W., Burns.
Gregory, V. B., Wallowa.
Griswold, J., Helix.
Henderson, T. M., Pendleton.
Huckin, W., Wasco.
Kistner, F. B., Heppner.
Logan, Hugh, The Dalles.
Logan, J. M., The Dalles.
Lieuallen, F. A., Pilot Rock.
Kirby, E. G., Elgin.
Moliter, N., La Grande.
McFaul, J. D., Pendleton.
Parker, E. O., Pendleton.
Phy, W. T., Hot Lake.
Prinzing, J., Ontario.
Ringo, R. E., Pendleton.
Robinson, David Mosier.
Smith, C. J., Pendleton.
Shaw, M. F., Hood River.
Spencer, W. O., Huntington.
Temple, I. U., Pendleton.
Thomas, C. W., Milton.
Trueblood, W. A., Baker City.
Taylor, M. B., Grass Valley.
Waffle, E. B., Pendleton.
Whiting, H. W., Elgin.
Winnard, N. E., Heppner.
Walsh, J. P., Halfway.
Waffle, Clara R., Pendleton.

LANE COUNTY MEDICAL SOCIETY.

President, Wm. Kuykendall; Secretary, J. F. Titus.

Bartle, P. J., Eugene.
Beardsley, G. S., Eugene.
Brown, L. W., Eugene.
Barr, J. R., Springfield.
Colcord, D. B., Creswell.
DeBar, Geo. O., Eugene.
Day, F. M., Eugene.
Cheschire, W. L., Eugene.
Cannon, H. C., Eugene.
Cummings, F. W., Eugene.
Fletcher, E. L., Eugene.
Job, B. R., Cottage Grove.
Johnson, T. K., Marcola.
Kime, A. W., Cottage Grove.
Kuykendall, Wm., Eugene.
Leep, K. A., Eugene.
McDougal, L. E., Eugene.
Harris, T. W., Eugene.
Jarnigan, M. E., Eugene.
Prosser, W. O., Eugene.
Prentice, F. W., Eugene.
Titus, J. F., Eugene.
Scaefe, B. F., Eugene.
Payne, D. A., Eugene.
Selover, F. E., Eugene.
Southworth, C. W., Eugene.
Scarborough, L. D., Creswell.
Schleff, H. G., Cottage Grove.
Titus, J. F., Eugene.
Van Winkle, J. O., Cottage Grove.
Wall, Geo., Eugene.

MARION COUNTY MEDICAL SOCIETY.

President, W. B. Morse; Secretary, G. C. Bellinger.

Beauchamp, H. A., Stayton.
Bellinger, G. C., Salem.
Brooks, F. M., Silton.
Byrd, W. H., Salem.
Byrd, R. D., Portland.
Cartwright, R. C., Salem.
Clay, H. E., Salem.
Clements, H. J., Salem.
Ellis, G. V., Salem.
Evans, J. C., Salem.
Fairchild, J. H., Salem.
Fisher, E. E., Salem.
Fitzgerald, P. H., Gervais.
Fox, M. C., Gervais.
Griffith, L. F., Salem.
Kleinsorge, R. E., Silverton.
Lewis, F. D., Salem.
Miles, O. B., Salem.
Morse, W. B., Salem.
Ransom, C. L., Mill City.
Robertson, C. H., Salem.
Robnett, J. H., Salem.
Smith, F. E., Salem.
Smith, J. N., Salem.
Smith, W. C., Salem.
Steeves, R. E. L., Salem.
Steiner, R. E. L., Salem.
Tamiesie, A. E., Salem.
Thompson, F. H., Stayton.

POLK AND YAMHILL COUNTIES MEDICAL SOCIETY.

President, W. C. Gilstrap; Secretary, L. A. Bollman.

Bollman, L. A., Dallas.
Butler, Otis Independence.
Carey, W. S., Dallas.
Coffeen, F. H., North Yamhill.
Gilstrap, W. C., Sheridan.
Goucher, E. E., McMinnville.
Hewett, L. L., Independence.
Mathhis, C. R., Amity.
Officer, W. B., Falls City.
McCallon, B. H., Dallas.
Reitzel, M. E., Dayton.
Russel, J. I., Willamina.
Smith, W. Tyler, Sheridan.
Starbuck, A. B., Dallas.
Wood, R. L., Smith.
Wood, J. T., McMinnville.
Williams, Chas., McMinnville.

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Amos, W. F., Portland.
Buck, Louis, Portland.
Batcheller, J. M., Portland.
Bell, J. F., Portland.
Binswanger, O. S., Portland.
Boyd, W. H., Portland.
Boys, Wm., Portland.
Bristow, J. H., Portland.
Bruere, G. E., Portland.
Biersdorf, H. R., Portland.
Baar, Gustave, Portland.
Blaney, O. C., Portland.
Brooke, F. W., Portland.
Babbitt, O. M., Portland.
Baird, A. W., Portland.
Beaumont, J. F., Portland.
Bedine, C. D., Portland.
Bettman, A. G., Portland.
Blochley, A. T., Woodstock.
Browning, A. J., Portland.
Booth, C. L., Portland.
Brown, E., Portland.
Cable, E. E., Portland.
Cardwell, M. H., Portland.
Crockett, E. N., Portland.
Coe, H. W., Portland.
Coghlan, J. N., Portland.
Connell, E. DeW., Portland.
Chance, A. W., Portland.
Campbell, W. M., Portland.
Coffman, W. R., Portland.
Courtney, J. S., Portland.
Candiani, C. F., Portland.
Chamberlain, C. T., Portland.
Chipman, R. J., Portland.
Coffey, R. C., Portland.
Cottel, W. I., Portland.
Carll, W. E., Oregon City.
Christmas, G. E., Portland.
Creadick, A. N., Portland.
Dickson, J. F., Portland.
Dammasch, F. H., Portland.
Darr, C. I., Portland.
Dearborn, E. K., Portland.
Dedman, H. A., Canby.
Dunlap, R. E., Portland.
Donnelly, J. F., Portland.
DeVaul, Oscar, Portsmouth.
Equi, M. D., Portland.
Ellis, R. H., Portland.
Ettelson, J., Portland.
Ewin, W. H., Portland.
Fenton, H. C., Portland.
Fenton, R. A., Portland.
Fessler, Theo., Portland.
Fried, Marcus, Portland.
French, C. G., Portland.
Flagg, C. E. B., Vancouver, Wn.
Flagg, Julia H., Vaancouver, Wn.
Gilbert, J. A., Portland.
Gillespie, R. L., Portland.
Geary, E. P., Portland.
Giesy, A. J., Portland.
Gullette, Fred, Portland.
Grim, J. G., Portland.
Gellert, S. M., Portland.
Greene, H. M., Portland.
Goray, J. P., Portland.
Gold, H. D., Portland.
Hollister, O. C., Portland.
Hosmer, C. S., Portland.
Hamilton, L. H., Portland.
House, Wm., Portland.
Holden, W. B., Portland.
Hill, C. E., Portland.
Hickman, J. H., Portland.
Hubbard, W. F., Portland.
Hall(C. G., Portland.
Higgs, A. K., Portland.
Hyde, L. W., Portland.
Hall, J. E., Portland.
Hare, W. B., Portland.
Holt, R. L., Portland.
Hawke, C. E., Portland.
Irvine, Lloyd, Portland.
Jefferson, G. O., Portland.
Jones, Wm., Portland.
Josephi, S. E., Portland.
Johnson, A. H., Portland.
Jefferds, E. D., Portland.
Jones, N. W., Portland.
Kirkpatrick, M., Portland.
Keeney, H. I., Portland.
Kelly, R., Portland.
King, J. C., Portland.
Kiehle, F. A., Portland.
Keene, C. W., Portland.
Koehler, G. F., Portland.
Killingsworth, W., Portland.
Knox, W. S.,
Labbe, E. J., Portland.
Lane, Harry, Portland.
Locke, J. K., Portland.
Lockwood, W. D., Arletta.
Loeb, Sanford, Portland.
LeFevre, J. T. Portland.
McCollum, J. W., Portland.
Mackenzie, K. A. J., Portland.
Manion, K. C., Portland.
Mackay, A. E., Portland.
Marsh, R. J., Portland.
Moore, A. W., Portland.
Moore, C. C., Portland.
Moore, J. S., Portland.
McChesney, Jos., St. Johns.
Mount, H. S., Oregon City.
Marshall, E. A., Portland.
Matson, R. C., Portland.
Matson, R. C., Portland.
Macrum, C. A., Portland.
Marcellus, M. B., Portland.
Manion, M. B., Portland.
McGavin, J. S., Portland.
McKay, Harry, Portland.
McCusker, C. J., Portland.
McArthur, J. H., Portland.
Montgomery, J. H., Portland.
McCorkle, M. G., Portland.
McKechnie, W. C., Portland.
Murbach, C. F., Portland.
McLachlan, M., Portland.
McDaniel, R. C., Portland.
McDaniel, E. B., Portland.
Nunn, Richard, Portland.
Norden, B. L., Portland.
Nichols, A. S., Portland.
Nichols, C. L., Portland.
Nichols, Herbert, Portland.
Ong, H. F., Portland.
Ostrander, G. H., Portland.
O'Day, C. C., Portland.
Panton, A. C., Portland.
Panton, J. J., Portland.
Patton, E. D., Portland.
Pettit, J. A., Portland.
Pohl, Esther, Portland.
Pohl, Emil, Portland.
Plummer, O. P. S., Portland.
Pierce, E. A., Portland.
Payne, P. J., Portland.
Parker, H. G., Portland.
Parrish, Geo., Portland.
Poley, C. L., Portland.
Pease, G. N., Portland.
Quigley, M., Portland.
Rosendorff, M., Portland.
Roth, J. B., Portland.
Rogge, W. J., Portland.
Rockey, A. E., Portland.
Rand, D. H., Portland.
Ricen, Leo, Portland.
Richardson, B. M., Portland.
Rostnberg, J. J., Portland.
Ransom, W. C., Portland.
Skene, W. H., Portland.
Smith, A. C., Portland.
Smith, A. W., Portland.
Smith, F. S Portland.
Sternberg, Jos., Portland.
Sommers, E. A., Portland.
Strickland, M. C., Oregon City.
Sheldon, S. H., Portland.
Slocum, S. C., Portland.
Short, J. M., Gresham.
Seamann, C. S., Portland.
Sabin, C. G., Portland.
Stearns, R. S., Portland.
Spencer, W. V., Portland.
Short, F. A., Portland.
Story, G. B., Portland.
Story, L. E., Portland.
Start. G. A., Portland.
Stott, J. S., Portland.
Stewart, J. A., Portland.
Swensson, J. G., Portland.
Sellwood, J. J., Portland.
Sifton, J. F., Portland.
Stewart, W. E., Portland.
Stedman, C. J., Portland.
Sargentich, S., Portland.
Tucker, E. F., Portland.
Taylor, F. M., Portland.
Thornton, E. G., Portland.
Tilzer, A,. Portland
Trommald, G. H., Portland
Townley, J. T., Milwaukee
VanAlstine, E. E., Portland
Walls, J. T., Portland
Walker, A. D., Portland
Wetherbee, J. R., Portland.
Wells, G. M., Portland.
Wilson, H. G., Portland.
Wilson, G. F., Portland.
Wood, W. L., Portland.
Webster, A. M., Portland.
Wheeler, Glenn, Portland.
Wheeler, C. H., Portland.
Weir, H., Portland.
Walker, R. C., Portland.
White, C. S., Portland.
Woodruff, W. G., Portland.
Whiting, S., Portland.
Whiteside, G. S., Portland.
Williamson, W. T., Portland.
Wight, O. B., Portland.
Wiley, J. O. C., Portland.
Wolf, L. J., Portland.
Wellington, W. H., Portland.
Yenney, R. C., Portland.
Zan, J. C., Portland.
Zeigler, Amelia, Portland.

SOUTHERN OREGON DISTRICT MEDICAL SOCIETY.

President, F. G. Swedenburg; Secretary, A. C. Seeley.

Brower, D. M., Ashland.
Conroy, R. J., Medford.
DeVore, B. F., Oakland.
Findley, M. A., Grants Pass.
Fawcett, A. J., Ashland.
Gilmore, W. C., Oakland.
Gregg, C. M., Ashland.
Hargreave, H. P., Medford.
Houck, G. E., Roseburg.
Heminway, Stacey, Yainax.
Holt, W. W. P., Eagle Point.
Hosmer, J. E., Ashland.
Lockwood, S. A., Medford.
Lemon, Cora B., Grants Pass.
Flannigan, W. H., Grants Pass.
Johnson, W. S., Bonanza.
Merriman, Geo. H., Klamath Falls.
Love, D. P., Myrtle Creek.
Morrison, H. E., Medford.
Pickel, E. B., Medford.
Parker, Thos., Klamath Falls.
Seeley, A. C., Roseburg.
Shaw, H. N., Ashland.
Shaw, Mattie B., Ashland.
Stearns, R. W., Medford.
Stricker, F. D., Grants Pass.
Smith, J. C., Grants Pass.
Swedenburg, F. G., Ashland.
Thayer, F. G., Medford.
Seeley, A. C., Roseburg.
Stewart, E. B., Roseburg.
Smick, R. F., Myrtle Point.
Truax, J. P., Grants Pass.
Van Dyke, F. W., Grants Pass.

WASHINGTON COUNTY MEDICAL SOCIETY.

President, J. P. Tamiesie; Secretary, ———.

Baker, J. A. Gaston.
Bailey, F. A., Hillsboro.
Bailey, A. B., Hillsboro.
Linklater, S. T., Hillsboro.
Mumord, W. B., Banks.
Saylor, A. L., Sherwood.
Tamiesie, J. P., Hillsboro.
Wood, W. D., Hillsboro.

WASHINGTON.

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The following list includes the members of the county societies who were in good standing in the State Medical Association January 1, 1911.

BENTON COUNTY MEDICAL SOCIETY.

President, ————; Secretary, H. W Howard.

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Crosby, F. M., Kennewick.
French, H. M., Prosser.
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Howard, H. W., Prosser.
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President, H. B. Haskell; Secretary, T. H. Grosvenor.

Blake, J. H., Wenatchee.
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Gilchrist, C., Wenatchee.
Grosvenor, T. H., Wenatchee.
Haskell, H. B., Wenatchee.
Judah, J. S., Leavenworth.
Kaup, A. T., Wenatchee.
McCoy, W. M., Wenatchee.

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President, A. S. Austin; Secretary, C. E. Bartlett.

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Austin, A. S., Aberdeen.
Austin, O. R., Aberdeen.
Bartlett, C. E., Aberdeen.
Blair, H., Elma.
Carr, F. L., Montesano.
Chamberlain, G. E., Aberdeen.
French, E. P., Elma.
Hunter, R. F., Hoquiam.
Jones, C. W., Elma.
MacLafferty, B. N., Aberdeen.
MacLafferty, M., Aberdeen.
Marcy, G. E., Montesano.
McDonald, J. F., Hoquiam.
McNiven, J. A., Aberdeen.
Pearson, M. L., Aberdeen.
Schumacher, D. A., Aberdeen.
Smith, W. A., Centralia.
Stapp, M. R., Aberdeen.
VanWinkle, J. O., Oaksville.
Watkins, I. R., Aberdeen.
Wells, W. B., Hoquiam.

CLALLAM COUNTY MEDICAL SOCIETY.

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Cook, L. A. H., Sequim.
Lewis, F. S., Port Angeles.
McGillvray, D. E., Port Angeles.
Taylor, W. J., Fairfield.

CLARKE COUNTY MEDICAL SOCIETY.

President, R. D. Wiswall; Secretary, H. S. Goddard.

Black, R. G., Vancouver.
Cass, W. E., Vancouver.
Flagg, C. E. B., Vancouver.
Flagg, Julia, Vancouver.
Goddard, H. S., Vancouver.
Hixon, E. F., Vancouver.
Lieser, M. A., Vancouver.
McCown, C. C., Vancouver.
Scanlon, J. D., Vancouver.
Smith, R. L., Washougal.
Stevenson, A. W., Yacolt.
Stryker, R. S., Ridgefield.
Wiswall, R. D., Vancouver.
Wright, S. L., Camas.
Zener, C. R., Spokane.

COWLITZ COUNTY MEDICAL SOCIETY.

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Bales, C. W., Kelso.
Ballard, J., Kelso.
Bird, F. A., Kelso.
Campbell, T. C., Castle Rock.
Chapman, A. H., Woodland.
Sims, L. M.. Kalama.
Signor, W. M., Kelso.

JEFFERSON COUNTY MEDICAL SOCIETY.

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Carter, P. B., Port Townsend.
DeVoe, R. G., Fort Worden.
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Hill. R. C., Irondale.
Oakley, J. H., Port Townsend.
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Webb, Jas., Irondale.
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Anderson, W. H., Seattle.
Appleton, T. J., Seattle.
Ashton, F. L., Seattle.
Babcock, O. D., Seattle.
Bailey, J. W., Seattle.
Baker, W. P., Seattle.
Bates, U. C.. Seattle.
Beeler, G. W., Seattle.
Benshoff, J. A., Seattle.
Bentley, Frederick, Seattle.
Bickford, E. L., Seattle.
Black, F. A., Seattle.
Bleuler, E. A., Seattle.
Booth, F. A., Seattle.
Booth, J. R., Seattle.
Booth, W. G., Seattle.
Bowes. Edward, Seattle.
Bourns, F. S., Seattle.
Bridenstine, S. J., Seattle.
Brinson, E. L., Seattle.
Bronson, Adolph, Brighton Beach.
Brown, F. H., Seattle.
Brown, H. D., Seattle.
Brown J. M., Seattle.
Buckley, Daniel, Seattle.
Burdon, M. D., Seattle.
Burke, R. T., North Bend.
Burns. A. E., Seattle.
Burwell, E. B., Seattle.
Buss, L. A., Seattle.
Calhoun. Grant, Seattle.
Canfield, H. H., Seattle.
Capron, V. J., Roche Harbor.
Cardwell, D. T., Seattle.
Carroll, F. M., Seattle.
Case, S. W., Seattle.
Cassels, W. G., Seattle.
Chessman, F. M., Seattle.
Christensen, W. T., Seattle.
Churchill, F. A., Seattle.
Clark, H. J., Seattle.
Closson, G. L., Seattle.
Cobb, C. D., Seattle.
Coe, H. E., Seattle.
Collier, L. B., Seattle.
Colliver, S. N.. Seattle
Conn, F. M., Seattle.
Cook, C. T., Seattle.
Cook. Frederick, Interbay.
Corson, W. H., Georgetown.
Cowan, C. B., Seattle.
Crawhall, G. W., Seattle.
Creighton, J. E., Seattle.
Crooks, J. W., Seattle.
Crookall, A. C., Seattle.
Cunningham, W. F., Seattle.
Dallenbach, J. C., Seattle.
Davidson, C. F., Seattle.
Davidson, H. J., Seattle.
Davis, C. W., Seattle.
Dawson, L. R., Seattle.
Dean, S. J., Seattle.
DeBeck, David, Seattle.
De Donato, X. P., Seattle.
Dowling, J. T., Seattle.
Dowling, G. A., Seattle.
Dudley, H. D., Seattle.
Dyer, H. C., Seattle.
Eagleson, J. B., Seattle.
Eaton, C. E., Seattle.
Edwards, A. F., Seattle.
Edwards, Orange, Seattle.
Elmore. Bruce, Seattle.

Engels, C. F., Seattle.
Ewing, D. A, Seattle.
Everly, W., Seattle.
Everly, M. L., Seattle.
Falk, Fred, Seattle.
Fassett, F. J., Seattle.
Fick, E. P., Seattle.
Fiset, L. O., Seattle.
Fleischer, H. J., Everett.
Forbes, R. D., Seattle.
Ford, C. B., Seattle.
France, Rowe, Seattle.
Gannoway, C. R., Seattle.
Gardner, F. P., Seattle.
Gellhorn, W., Seattle.
Ghiglione, A. J., Seattle.
Gibson, W. C., Seattle.
Gibson, W. E., Issaquah.
Gingles, R. R., Seattle.
Goodenow, N. H., Seattle.
Gosnell, J. C., Seattle.
Gould, A. R., Kent.
Gray, C. E., Seattle.
Green, I. B., Seattle.
Greenstreet, A. G., Seattle.
Greason, C. E., Skykomish.
Greiner, H. A., Seattle.
Griswold, W. S., Seattle.
Guthrie, C. E., Seattle.
Hagward, C. E., Seattle.
Hall, D. C., Seattle.
Hall, W. H., Seattle.
Hanley, E. T., Seattle.
Hahn, B., Seattle.
Harris, J. E., Arlington.
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Harrison, Millard, Seattle.
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Hawley, A. W., Seattle.
Heavenrich, A. T., Seatle.
Heg, E. E., Seattle.
Hemmeon, J. A. M., Seattle.
Hemmingway, E. E., Seattle.
Heussy, W. C., Seattle.
Hibbs, W. A., Seattle.
Hoffman, C. B., Kent.
Hoffman, W. F., Seattle.
Holcomb, C. M., Seattle.
Holmes, S. J., Seattle.
Holmes, T. H., Bremerton.
Hooker, S. V. R., Seattle.
Horton, G. M., Seattle.
Horsfall, F. L., Seattle.
Houston, D. A., Seattle.
Hoye,, B. E,. Auburn.
Hunt, J. W., Seattle.
Hutchinson, J. T., Seattle.
Irvin, L. C., Seattle.
Irwin, P. C., Seattle.
Jacobson, L. H., Seattle.
James, R. J., Seattle.
Janson, Elio, Seattle.
Janson, Ivar, Seattle.
Jenner, William, Seattle.
Johanson, N. A., Seattle.
Johnston, Walter, Seattle.
Jones, E. O., Seattle.
Jordan, Arthur, Seattle.
Kantner, W. C., Seattle.
Kelley, E. R., Seattle.
Keith, L. R., Seattle.
Kidd, A. B., Seattle.
Kingsley, R. J., Seattle.
Klamke, E., Port Gamble.
Klemptner, Louis, Seattle.
Knudson, C. W., Seattle.
La Motte, Henry, Seattle.
Lane, J. L., Seattle.
Lanter, E. C., Seattle.
Lazelle, H. G., Seattle.
Lee, E. C., Seattle.
Leiser, J. J., Seattle.
Lensman, A. P., Seattle.
Lessing, Albert, Seattle.
Lind, C. O., Seattle.
Lippincott, W. C., Seattle.
Livingston, David, Black Diamond.
Loe, A. O., Seattle.
Loughary, J. B., Seattle.
Ludlow, W. L., Seattle.
Lyon, D. B., Seattle.
Lyons, J. H., Seattle.
Lyttle, E. E., Seattle.
Manning, J. B., Seattle.
Markey, F. F., Seattle.
Marsh, Marietta, Seattle.
Martin, C. M., Bellvue.
Mason, J. T., Seattle.
Maxson, Frank, Seattle.
MacKinnon, J. A., Seattle.
MacWhinnie, A. M., Seattle.
McBride, J. C., Seattle.
McClannahan, A. L., Seattle.
McClure, C. E., Seattle.
McCulloch, G. B., Seattle.
McDonald, E. A., Seattle.
McDowell, W. M., Seattle.
McKechnie, M. E. A., Seattle.
McKibbin, E. C., Vashon.
McKinney, M. W., Seattle.
McLeish, A. H., Seattle.
McLoughlin, G. N., Seattle.
Merritt, F. D., Auburn.
Merritt, W. D., Seattle.
Miles, W. T., Seattle.
Millett, J. H., Seattle.
Mitchell, D. A., Seattle.
Mitchell, J. W., Seattle.
Moore, J. C., Seattle.
Munson, D. L., Seattle.
Murray, D. A., Seattle.
Nadeau, Fonda, Seattle.
Neville, E. C., Seattle.
Neville, L. C., Seattle.
New, C. W., Seattle.
Newlands, Geo., Seattle.
Nicholson, D. A., Seattle.
Null, M. M., Seattle.
O'Rourke, W. P., Seattle.
Osborn, J. M., Seattle.
O'Shea, R. J., Seattle.
Ostrom, H. C., Seattle.
Owens, S. A., Seattle.
Palmer, D. H., Seattle.
Palmer, F. S., Seattle.
Park, M. M., Seattle.
Parker, Maud, Seattle.
Parry, I. A., Seattle.
Paschall, B. S., Seattle.
Patterson, W. M., Seattle.
Peacock, A. H., Seattle.
Pennel, F. C., Seattle.
Perry, R. W., Seattle.
Peterkin, G. S., Seattle.
Phillips, Fredericka, Seattle.
Pierrot, G. F., Seattle.
Pontius, N. D., Seattle.
Pry, E. T., Olalla.
Purman, R. M., Seattle.
Raberge, F. L., Seattle.
Randell, G. H., Seattle.
Raymond, Alfred, Seattle.
Read, H. M., Seattle.
Redon, L. H., Seattle.
Reese, H. L., Seattle.
Richardson, J. W., Seattle.
Richter, J., Seattle.
Rininger, E. M., Seattle.
Rorabaugh, C. R., Seattle.
Ross, R. R., Seattle.
Rust, H. H., Enumclaw.
Russel, Montgomery, Seattle.
Rutherford, C. A., Seattle.
Saxe, Cora, Seattle.
Scott, W. B., Seattle.
Scott, W. R., Seattle.
Seelye, W. K., Seattle.
Shannon, James, Seattle.
Shannon, W. A., Seattle.
Shepard, F. L., Seattle.
Sharples, C. W., Seattle.
Shellabarger, D. S., Seattle.
Silverberg, C. W., Seattle.
Simpson, A. N., Seattle.
Sleicher, J. M., Chehalis.
Sloan, T. W., Seattle.
Smith, C. A., Seattle.
Smith, J. J., Enumclaw.
Smith, R. P., Seattle.
Snively, J. H., Seattle.
Snow, A. G., Seattle.
Snyder, J. C., Seattle.
Sparling, G. H., New Castle.
Spurgeon, G. C., Seattle.
Stevens, J. E., Seattle.
Stewart, S. J., Seattle.
Stillson, H. H., Seattle.
Stith, R. M., Seattle.
Stone, D. M., Seattle.
Sturgis, Milton, Seattle.
Sullivan, T. J., Seattle.
Sundberg, J. C., Seattle.
Sweeney, J. P., Seattle.
Swift, J. W., Seattle.
Taake, E. F., Seattle.
Taggert, E. J., Bremerton.
Teepel, Wm., Seattle.
Templeton, C. L., Seattle.
Thomas, J. S., Seattle.
Thomas, J. W., Seattle.
Thomson, C. H., Seattle.
Thompson, H. B., Seattle.
Tinney, C. M., Seattle.
Turner, Kenneth, Omak.
Turner, W. K., Port Angeles.
Tymms, W. R., Orting.
Underwood, F. R., Seattle.
Uyematzu, T., Seattle.
vonPhul, P. V., Seattle.
Warhanik, C. A., Seattle.
Warmbug, Geo., Seattle.
Watanabe, J., Seattle.
Waughop, P. H., Seattle.
West P. L., Seattle.
Whiting, F. B., Seattle.
Wiger, N. N., Seattle.
Wilkins, J. W., Seattle.
Williams, A. S., Seattle.
Willis, P. W., Seattle.
Wilson, A. D., Seattle.
Wiltsie, S. F., Seattle.
Winslow, Kenelm, Seattle.
Wolley, W. T., Seattle.
Wright, H. A., Seattle.
Wood, C. B., Seattle.
Wood, N. P., Seattle.
Woodin, S. P., Seattle.
Woodward, W. C., Seattle.
Wotherspoon, John, Seattle.
Wright, H. A., Seattle.
Würdemann, H. V., Seattle.
Young, E. W., Seattle.

KITTITAS COUNTY MEDICAL SOCIETY.

President, C. L. Hoeffler; Secretary, G. M. Steele.

Baldwin, T. E., Spokane.
Chandler, C. E., Thorp.
Felch, H. J., Ellensburg.
Hoeffler, C. L., Ellensburg.
Kearby, D. O., Cle Elum.
Mahan, J. A., Ellensburg.
McCauley, J. C., Ellensburg.
Newgord, J. S., Cle Elum.
Power, I. N., Cle Elum.
Steele, G. M., Ellensburg.
Stimpson, E. W., Roslyn.

LEWIS COUNTY MEDICAL SOCIETY.

President, E. L. Kniskern; Secretary, W. B. Hotchkiss.

Andrews, H. J., Bucoda.
Baldwin, Margaret, Centralia.
Banks, R. B. L., Centralia.
Botzer, Wm., Mayfield.
Campbell, R. H., Little Falls.
Coleman, J. T., Chehalis.
Dow, G. H., Chehalis.
Dumon, J. H., Centralia.
Godfrey, B. G., Chehalis
Harden, Chas., Chehalis.
Hotchkiss, W. B., Chehalis.
Honda, E. O., Centralia.
Kniskern, E. L., Centralia
Perry, E. R., Raymond.
Petit, H. L., Chehalis.
Primmer, Thos., Centralia.
Stevens, E. W., Dryad.
Weichbrod, I. A., Little Falls.

LINCOLN COUNTY MEDICAL SOCIETY.

President, Lee Ganson; Secretary, L. F. Wagner.

Adams, O. L., Davenport.
Bittner, J. E., Sprague.
Clarke, I. S., Sprague.
Corpening, J. M., Harrington.
Dean, H. Z., Reardan.
Edward, J. T., Wilbur.
Ganson, Lee, Odessa.
Green, G. H., Reardan.
Hamley, E. C., Sprague.
Kaulbach, J., Edwall.
Lunz, J. J., Odessa.
McRae, R. D., Hunter.
Mitchell, Henry, Wilson Creek.
Moore, G. W. H., Almira.
Moore, R. P., Davenport.
Myers, M., Davenport.
Richards, C. P., Almira.
Snyder, A. D., Creston.
Wagner, L. F., Harrington.

OKANOGAN COUNTY MEDICAL SOCIETY.

President, H. M. Fryer; Secretary, C. R. McKinley.

Couche, C. B., Twisp.
Fryer, H. M., Riverside.
House, C. P., Oroville.
McKinley, C. R., Brewster.
Rogers, Albert, Okanogan.
Schwabland, W. T., Oroville.
Schwabland, W. W., Loomis.
Tyler, F. A., Molson.

PACIFIC COCUNTY MEDICAL SOCIETY.

President, Wilson Gruwell; Secretary, O. R. Nevitt.

Alley, A. G., Raymond.
Barkman, H. C., Raymond.
Barkman, H. S., Raymond.
Dalton, Henry, South Bend.
Gruwell, Wilson, South Bend.
Mathiew, A. L., South Bend.
Nevitt, O. R., Raymond.

PIERCE COUNTY MEDICAL SOCIETY.

President, J. B. McNerthney; Secretary, O. E. Sutton.

Allan, Hamilton, Tacoma.
Argue, H. S., Tacoma.
Armstrong, J., Tacoma.
Ball, R. O., Tacoma.
Balabanoff, C. P., Tacoma.
Balabanoff, I. P., Tacoma.
Balabanoff, M. C., Tacoma.
Bean, J. W., Tacoma.
Braden, A. E., Tacoma.
Brenton, P. R., Mineral.
Bridge, A. W., Tacoma.
Brown, E. M., Tacoma.
Brown, J. R., Tacoma.
Brown, Warren, Tacoma.
Calhoun, A. P., Steilacoom.
Carlson, E. S., Tacoma.
Case, C. E., Tacoma.
Chenowith, W. S., Fern Hill.
Clay, O. M., Tacoma.
Cline, J. W., Tacoma.
Dana, H. P., Tacoma.
Delaney, F. J., Tacoma.
Dewey, H. W., Tacoma.
Doughty, J. W., Tacoma.
Drake,, B. E., Tacoma.
Fifield, E. J., Tacoma.
Flynn, A. M., Tacoma.
Foreman, B. H., Tacoma.
Garnett, R. S., Tacoma.
Goldsmith, A. E., Tacoma.
Gove, R. A., Tacoma.
Gove, D. A., Orting.
Griggs, J. F., Tacoma.
Gulick, W. V., Tacoma.
Hards, H. J., Tacoma.
Harrison, R. H., Tacoma.
Hicks, G. S., Tacoma.
Hill, F. R., Tacoma.
Hutchinson, J. L., Tacoma.
Hunter, C. O., McKenna.
James, C. P., Tacoma.
James, E. W., Tacoma.
Jones, Josiah, Tacoma.
Keho, J., Tacoma.
Keller. W. N., Tacoma.
Kinnear, C. H., Tacoma.
Kunz, G. R., Tacoma.
Le Gasa, J. A., Tacoma.
Libby, G. A., Tacoma.
Loughlin, O. W., Tacoma.
Love, L. L., Tacoma.
MacLean, S. M., Tacoma.
McCreary, C. R., Tacoma.
McCreery, W. B., Tacoma.
McKone, J. J., Tacoma.
McNerthney, J. B., Tacoma.
Monroe, W. A., Tacoma.
Montague, E. A., Tacoma.
Monzingo, A. S., Tacoma.
Mowers, S. W., Tacoma.
Osborn, Albert, Tacoma.
Osborn, E. St. C., Tacoma.
Paul, B. E., Tacoma.
Perkins, L. M., Tacoma.
Perkins, M. H., Tacoma.
Pratt, F. E., Tacoma.
Quevli, Christen, Tacoma.
Read, W. D., Tacoma.
Regli, J. A., Tacoma.
Reynolds, A. E., Tacoma.
Rich, E. A., Tacoma.
Robertson, J. B., Tacoma.
Rummel, T. C., Tacoma.
Rinkenberger, F. W., Tacoma.
Runnals, H. B., Puyallup.
Ryning, J. L., Tacoma.
Sargentish, S., Seattle.
Schug, F. J., Tacoma.
Scott, F. A., Tacoma.
Shaver, G. D., Tacoma.
Sheets, J. H., Buckley.
Smeal, J. S., Tacoma.
Smith, T. F., Tacoma.
Snoke, J. W., Steilacoom.
Southworth, F. W., Tacoma.
Steagall, T. R., Tacoma.
Stewart, A. C., Tacoma.
Stewart, F. J., Tacoma.
Sutton, E. O., Tacoma.
Swearingen, P. B., Tacoma.
Taylor, C. E., Wilkeson.
Tromald, E. A., Tacoma.
VanVetchen, Wm., Tacoma.
Wagner, G. W., Tacoma.
Wheeler, E. C., Tacoma.
Whitney, C. E., Buckley.
Wilson, C. S., Tacoma.
Wilson, R. D., Tacoma.
Wing, P. B., Tacoma.
Yocom, J. R., Tacoma.

SKAGIT COUNTY MEDICAL SOCIETY.

President, H. E. Clevcland; Secretary, W. N. Hunt.

Aggerton, G. G., Anacortes.
Appleby, W., Anacortes.
Brandt, A. L., Mt. Vernon.
Cleveland, H. E., Burlington.
Dorsy, W. A., Sedro-Woolley
Harbaugh, C. C., Sedro-Woolley.
Howe, G. E., LaConner.
Hunt, W. N., Burlington.
Jackson, J. L., Edson.
Kellner, R. G., Hamilton.
Mattice, M. B., Sedro-Woolley.
Mertz, E. F., Concrete.
Mills, J. F., Sedro-Woolley.
Morse, R. C., McMurray.
Osterman, A. J., Mt. Vernon.
Smith, G. B., Anacortes.

SNOHOMISH COUNTY MEDICAL SOCIETY.

President, W. F. West; Secretary, J. W. Parsons.

Adams, E. M., Arlington.
Allen, O. R., Burlington.
Chappell, Frank, Granite Falls.
Chisholm, J. E., Everett.
Clough, H. B., Sultan.
Cox, W. C., Everett.
Durand, W. S., Everett.
Durrent, J. A., Snohomish.
Duryee, A. P., Everett.
Eldridge, H. L., Snohomish.
Findley, H. P. Everett.
Harnett, A. L., Three Lakes.
Hartman, S., Everett.
Hedges, F. R., Everett.
Howard, H. P., Everett.
Jones, C. B., Everett.
Manning, J. F., Everett.
McCready, N. S., Snohomish.
McEacheron, D., Stanwood.
Mead, C. A., Everett.
Miller, F. R., Everett.
Munn, C. E., Marysville.
Musgrove, Thos. W., Sultan.
Newcomb, J. S., Everett.
Opsvig, P. L., Everett.
Parsons, I. W., Hartford.
Schmidt, O. W., Edmonds.
Stafford, E. A., Snohomish.
Soll, C. H., Monroe.
Smith, W. D., Everett.
Stevens, L. L., Monroe.
Stauffer, J. E., Everett.
Teigen, Margaret, Everett.
Thompson, N. L., Everett.
West, W. F., Everett.
Walker, P. M., Everett.

SPOKANE COUNTY MEDICAL SOCIETY.

President, H. B. Luhn; Secretary. Carroll Smith.

Abrams, C. J., Hillyard.
Abrams, W. E., Hillyard.
Allen, J. A., Medical Lake.
Allen, H. W., Spokane.
Allison, G. S., Spokane.
Anderson, J. B., Spokane.
Anthony, X. L., Spokane.
Baker, N. M., Spokane.
Barnhart, T. C., Spokane.
Beldon, G. G., Spokane.
Bertling, F. E., Spokane.
Broome, W. J., Spokane.
Brown, C. G., Spokane.
Brower, J. H., Spokane.
Byrne, J. C., Spokane.
Byrne, P. S., Spokane.
Catterson, T. L. Spokane.
Chambliss, C. M., Spokane.
Chapman, W., Spokane.
Coe, A. H., Burton.
Cole, T. O., Spokane.
Cockery, J. R., Spokane.
Cox, F. E., Cheney.
Cunningham, A. R., Spokane.
Cunningham, J. G., Spokane.
Deitz, Wm., Spangle.
Desmond, Edw., Spokane.
Doland, Chas., Spokane.
Doolittle, G. T., Spokane.
Downs, G. A., Spokane.
Drake, J. E., Spokane.
Dutton, W. O., Spokane.
Eakin, D. F., Spokane.
Edwards, J. F., Spokane.
Eickenbary, C. F., Spokane.
Emery, H. J., Spokane.
Ensley, G. W., Fairfield.
Essig, N. F., Spokane.
Farrow, Jos., Hillyard.
Fell, E. W., Medical Lake.
Freeman, B. R., Spokane.
Frost, W. S., Spokane.
Fursey, F. R., Spokane.
Gains, W. S., Hillyard.
Gallagher, P. J., Spokane.
Genoway, C. V., Spokane.
Ghieslin, A. D., Spokane.
Gould, G. M., Rockford.
Graves, J. C., Spokane.
Gray, G. A., Spokane.
Green, R. A., Spokane.
Greive, M. B., Spokane.
Grove, C. E., Spokane.
Gunning, J. M., Spokane.
Hall, J. F., Spokane.
Hall, W. L., Spokane.
Hanson, R., Spokane.
Harbison, J. G., Spokane.
Harvey, F. C., Spokane.
Harrington, W. W., Spokane.
Henderson, J. W., Lind.
Hendricks, Ralph, Spokane.
Hilcher, F. W., Spokane.
Hinman, Frank, Spokane.
Hoag, F. M., Spokane.
Hollingsworth, I. P., Seattle.
Hopkins, E. H., Spokane.
Hopkins, Miles, Spokane.
Hopkins, S. B., Spokane.
Howells, W. J., Spokane.
Hoxsey, J. H., Spokane.
Hubbard, F. L., Spokane.
Ingersoll, E. L., Spokane.
Johnson, A. C., Spokane.
Johnson, A. E., Spokane.
Johnson, H. W., Greenacres.
Johnston, Wilson, Spokane.
Kalb, C. S., Spokane.
Kearns, R. J., Spokane.
Keene, R. K., Spokane.
Kelley, J. M., Rockford.
Kimball, E. L. Spokane.
Lambert, S. E., Spokane.
Lasater, J. H., Ritzville.
Libby, G. W., Spokane.
Loffler, E. E., Spokane.
Luhn, H. B., Spokane.
Lundgren, A. R., Spokane.
MacLeod, A. F., Spokane.
Maier, F. W., Spokane.
Marion, A. F., Hatton.
Martin, H. S., Spokane.
Marshall, H. P., Spokane.
Mason, D., Spokane.
Matthews, A. A., Spokane.
Matthews, J. G., Spokane.
McCarthy, H. H., Spokane.
McCornack, P. D., Spokane.
McDowell, G. K., Spokane.

McKenzie, W. W., Spokane.
McLean, J. D., Mead.
McMillan, Mary, Spokane.
Melde, O. T., Spokane.
Merriam, C. K., Spokane.
Morrison, W. F., Spokane.
Munly, J. B., Spokane.
Mustard, J. J., Spokane.
Nather, F. B., Spokane.
Neeley, J. R., Spokane.
Neff, J. M., Spokane.
Nelson, E. B., Spokane.
Newell, R. I., Spokane.
Newman, W. M., Spokane.
Northrup, E. R., Spokane.
Olds, W. H., Spokane.
Olmstead, E. D., Spokane.
O'Neal, F. W., Spokane.
Oppenheimer, S. S., Spokane.
O'Shea, J. H., Spokane.
Penfield, C. S., Spokane.
Penn, G. T., Spokane.
Pickrell, W. B., Spokane.
Pomeroy, F. A., Cheney.
Pope, E. F., Spokane.
Potter, W. W., Spokane.
Power, Henry, Spokane.
Preucel, J. E., Spokane.
Quilliam, L. R., Walla Walla.
Reid, Peter, Spokane.
Richter, E., Spokane.
Riggs, C. F., Spokane.
Roark, B. H., Spokane.
Roberts, G. W., Spokane.
Robins, M. C., Spokane.
Robinson, L. A., Spokane.
Rhodehamel, H. E., Spokane.
Rohrer, G. A., Spokane.
Rose, Frank, Spokane.
Rose, F. E., Spokane.
Rosenkranz, Otto, Valley.
Russell, D. G., Spokane.
Russell, T. A., Spokane.
Sawins, A. H., Spokane.
Schlegel, H. E., Spokane.
Searcy, G. H., Spokane.
Semple, J. M., Spokane.
Sellers, Wm., Spokane.
Setters, M. F., Spokane.
Simon, H. A., Seattle.
Sinks, J. R., Spokane.
Slatter, H. H., Deer Park.
Smith, C. L., Spokane.
Smith, D. L., Spokane.
Smith, Harvey, Spokane.
Smith, J. L., Chattaroy.
Sutherland, J., Spokane.
Tennant, R. W., Spokane.
Thompson, R. L., Spokane.
Titus, S. H., Spokane.
Tooker, R. N., Spokane.
Veasey, C. A., Spokane.
Vail, H. D., Quincy.
Weisman, H. H., Spokane.
White, W. E., Spokane.
Whittaker, J. F., Spokane.
Wisner, W. O., Spokane.
Witter, F. P., Spokane.

THURSTON-MASON COUNTY MEDICAL SOCIETY.

President, N. J. Redpath; Secretary, W. L. Bridgord.

Beach, Wm., Shelton.
Bridgford, W. L., Olympia.
Ingham, G. W., Olympia.
Kincaid, Robt., Olympia.
Mowell, J. W., Olympia.
Partlow, H. W., Olympia.
Redpath, N. J., Olympia.
Strickland, H. S., Olympia.
Wells, C. H., Shelton.
Wyman, H. S., Olympia.

WALLA WALLA COUNTY MEDICAL SOCIETY.

President, J. W. Summers; Secretary, Y. C. Blalock.

Bennett, A. F., Walla Walla.
Blalock, N. G., Walla Walla.
Blalock, Y. C., Walla Walla.
Brigham, S. C., Walla Walla.
Butler, R. E., Waitsburg.
Cropp, J. F., Walla Walla.
Darby, J. A., Pomeroy.
Day, C. H., Dayton.
Donohoo, P., Dayton.
Ely, A. W., Walla Walla.
Ely, W. M., Walla Walla.
Garmon, C. P., Walla Walla.
Keylor, H. R., Walla Walla.
Kuykendall, G. B., Pomeroy.
Mount, H. A., Waitsburg.
Montgommery, C., Walla Walla.
Ostrom, E. E., Walla Wala.
Redner, L. R., Dayton.
Robinson, F. C., Walla Walla.
Russel, W. E., Walla Walla.
Stewart, C. B., Walla Walla.
Shaw, E. E., Walla Walla.
Smith, R. W., Walla Walla.
Summers, J. W., Walla Walla.
Suttner, C. N., Walla Walla.
Thomas, Bert, Walla Walla.
Van Patten, W. H., Walla Walla.
West, P. C., Bickleton.
Warner, W. H., College Place.
White, Eben, Pasco.

WHATCOM COUNTY MEDICAL SOCIETY.

President, F. V. Shute; Secretary, E. D. Hatch.

Axtell, W. H., Bellingham.
Ballaine, W. W., Bellingham.
Beebe, O. C., Everson.
Bice, G. R., Ferndale.
Biggs, D. E., Bellingham.
Birney, H. J., Bellingham.
Boynton, S. R., Bellingham.
Brier, U. G., Bellingham.
Clark, E. S., Sumas.
Compton, H. A., Bellingham.
Cook, G. T., Bellingham.
Cross, I. J., Bellingham.
Dalton, M. T., Sumas.
Erb, C. M., Bellingham.
Goodheart, J. W., Bellingham.
Hill, B., Huntsville.
Holt, C. L., Bellingham.
Hood, C. S., Ferndale.
Howe, S. S., Lynden.
Hunt, W. N., Burlington.
Johnson, S. H., Bellingham.
Kelly, S. N., Bellingham.
Keys, W. C., Bellingham.
Kirkpatrick, W. D., Bellingham.
Markley, L. R., Bellingham.
Mehlig, H. M., Bellingham.
Mohrmann, C., Lynden.
Morrison, J. R., Bellingham.
Powell, J. W., Bellingham.
Reed, C. O., East Sound.
Ruge, E. C., Bellingham.
Reedy, E. S., Seattle.
Sandborg, F. S., Bellingham.
Shute, F. V., Bellingham.
Sims, L. B., Bellingham.
Smith, A. M., Bellingham.
Smith, H. R., North Yakima.
Smith, J. S., Bellingham.
Torney, S. J., Bellingham.
Twiss, H. I., Seattle.
VanKirk, F. J., Bellingham.
Wear, N. W., Bellingham.
Wheaton, F. A., Bellingham.
Welch, J. W., Ferndale.

WHITMAN COUNTY MEDICAL SOCIETY.

President, Geo. Boyd; Secretary, J. E. Else.

Anderson, J. B., Rosalia.
Balsiger, J. A., Colfax.
Beistel, M. J., Malden.
Benton, A. A., Pullman.
Boyd, G., Palouse.
Brandon, W. C., Albion.
Bumgarner, C. S., Thornton.
Campbell, F. M., La Crosse.
Coberly, L. J., Garfield.
Cardwell, W. C., Colfax.
Clearwater, H. W., Alpine.
Cook, N. M., Palouse.
Devine, W. N., Elberton.
Dix, J. A., Garfield.
Else, J. E., Pullman.
Farnham, W., Palouse.
Hall, J. F., Albion.
Harvison, M. W., Seattle.
Hein, E. T., Palouse.
Holzer, D. A., Uniontown.
Leuty, J. D., Farmington.
McGuire, E., Pullman.
McIntyre, D., St. John.
Miller, J. L., Oakesdale.
Mitchell, W. A., Colfax.
Nelson, J. A., Tekoa.
Palmountain, W. B., Colfax.
Rosenkranz, O., Farmington.
Skaife, R. J., Colfax.
Spaulding, L. G., St. John.
Stevenson, J. W., Palouse.
Stuht, A. E., Colfax.
Victor, A. L., Farmington.
Weisel, P. E., Garfield.
Whitelaw, H. N., Oakesdale.
Whittaker, F. E., Palouse.

YAKIMA COUNTY MEDICAL SOCIETY.

President, Thos. Tetrau; Secretary, F. H. Brush.

Alexander, C. B., Mabton.
Bartley, J. H., Zillah.
Boone, W. H., North Yakima.
Brush, F. H., North Yakima.
Burns, J. B., North Yakima.
Cameron, John, North Yakima.
Cameron, S. D., North Yakima.
Carver, W. H., North Yakima.
Chase, E. F., North Yakima.
Collins, F. H., Goldendale.
Connell, R., North Yakima.
Cooper, R. P., North Yakima.
Courtright, J. L., North Yakima.
Fell, G. E., Buffalo.
Fletcher, C. G., North Yakima.
Frank, Philip, North Yakima.
Goodenow, N. H., Seattle.
Helton, A. J., North Yakima.
Keeler, C. E., North Yakima.
Lynch, C. J., North Yakima.
McCracken, Zillah.
Nagler, F. W., North Yakima.
Porter, L. L., North Yakima.
Rosser, D., North Yakima.
Rossiter, F. M., North Yakima.
Scott, J. F., Mabton.
Shuman, J. R., North Yakima.
Sloan, Geo., North Yakima.
Tetrau, Thos., North Yakima.
Thompson, J. R., North Yakima.
West, E. S., North Yakima.
Weyer, W. S., North Yakima.

IDAHO.

Officers: President, John W. Givens, Orofino; Vice-President, G. O. A. Kellogg, Nampa; Secretary-Treasurer, Ed. E. Maxey, Boise.

Committee Chairmen: Arrangements Committee, J. W. Gue, Caldwell; Legislative Committe, J. M. Taylor, Boise; Nomination Committee, J. C. Woodward, Payette; Public Health Committee, G. H. Coulthard, Idaho Falls.

Journal Trustees: R. L. Nourse, Boise; J. W. Givens, Orofino; W. T. Drysdale, New Plymouth.

Delegate to American Medical Association: A. A. Higgs, Boise; Alternate, C. L. Dutton, Meridian.

MEMBERS OF THE IDAHO STATE MEDICAL ASSOCIATION AND OFFICERS OF THE COMPONENT DISTRICT AND COUNTY SOCIETIES.

The following list includes the members of the district and county societies who were in good standing in the State Medical Association, January 1, 1911.

KOOTENAI-BONNER-SHOSHONE COUNTIES MEDICAL SOCIETY.

President, ———; Secretary, J. H. Shephard.

Mason, T. R., Wardner.
Prindle, E. S., Spirit Lake.
Collins, I. S., Burke.
Sears, Chas. E., Wallace.
(removed from state.
Leonard E., Wallace.
McKennon, M., Sandpoint.
Shepard, J. H., Coeur d'Alene.

NORTH IDAHO DISTRICT MEDICAL SOCIETY.

President, J. N. Clarke; Secretary, Joseph Aspray.

Aspray, Joseph, Moscow.
Alley, J. N., Lapwai.
Barrows, F. L., Moscow.
Bruce, Susan E., Lewiston.
Clarke, J. N., Moscow.
Clarke, Jessie K., Grangeville.
Fairly, J. M., Orofino.
Gaignard, George, Reubens.
Givens, John W., Orofino.
Gritman, C. L., Moscow.
Hurlburt, J. F., Lewiston.
Hoyt, J. E., Kendrick.
Lyle, J. M., Peck.
Morris, J. B., Lewiston.
Nourse, J. B., Lewiston.
Olson, J. W., Troy.
Rae, D. F., Moscow.
Rains, Jesse L., Grangeville.
Stoneburner, J. W., Leland.
Shaff, C. W., Lewiston.
Todd, E, A., Lewiston.
Wiik, J. C., Moscow.

SOUTH IDAHO DISTRICT MEDICAL SOCIETY.

President, C. L. Dutton; Secretary, R. L. Glase.

Albee, D. P., Albion.
Allen, C. B., Parma.
Avey, O. H., Payette.
Allen, C. S., Atlanta.
Boeck, L., Wardell.
Boeck, John, Boise.
Brereton, H. A., Boise.
Bowers, L. C., Boise.
Brandt, F. L., Boise.
Bartlett, J. C., Bruneau.
Clark, B. O., Emmett.
Calloway, Mary A,, Boise.
Cummings, R. N., Emmett.
Callard, C. B., Boise.
Cole, F. M., Caldwell.
Dutton, C. L., Meridian.
Drysdale, W. T., New Plymouth.
Dill, Chas. W., Shoshone.
Dudley, Stonewall B., Weiser.
Espe, G. G. Eagle.
Froom, J. E., Boise.
Falk, Ralph, Boise.
Gue, John, W., Caldwell.
Glase, R. L., Boise.
Goodfriend, H., Albion.
Hall, O. W., Star.
Higgs, A. A., Boise.
Hudgel, C. R., Boise.
Hosmer, A. J., Nampa.
Henry, J. W., Notus.
Johnson, Wallace, Roseberry.
Johnston, Mary E., Boise.
Kleinman, E. W., Hailey.
Kellogg, G. O. A., Nampa.
Kaley, C. M., Caldwell.
Lewis, J. B., Murphy.
Maxey, E. E., Boise.
Numbers, J. R., Boise.
Nourse, R. L., Boise.
Noth, R. F., American Falls.
Pittenger, Fred J, Boise.
Patterson, J. C. Burley.
Quick, R. W., Nampa.
Ross, H. P., Nampa.
Reynolds, J. L., Emmett.
Shawhan, G. E., Boise.
Stewart, J. L., Boise.
Smith, W. F., Boise.
Shirley, C. B., Weiser.
Schmitz, C. E., Cambridge.
Scott, E. K., Boise.
Sykes, Everett W., American Falls.
Taylor, J. M., Boise.
Tukey, W. H., Boise.
Titus, W. S., Boise.
Waldrop, W. E., Parma.
Woodward, I. R., Payette.
Woodward, J. C., Payette.
Waterhouse, G. M., Weiser.
Woodburn, J. M., Boise.
Young, J. A., Weiser.

TWIN FALLS COUNTY MEDICAL SOCIETY.

President, W. F. Pike; Secretary, J. S. Purdy.

Boyd, T. O., Twin Falls.
Coburn, J. B., Twin Falls.
Clouchek, H. W., Twin Falls.
Morgan, J. R., Twin Falls.
McClusky, A. S., Buhl.
Monroe, James, Buhl.
Newberry, A. A., Filer.
Pike, W. F., Twin Falls.
Purdy, J. S., Twin Falls.
Stearns, Moses, Twin Falls.
Stockslager, L. B., Twin Falls.
Scott, Chas. R., Twin Falls.
Weaver, C. D., Twin Falls.
Weatherby, Chas., Buhl.
Wilson, W. H., Twin Falls.
White, John J., Kimberly.

MEMBERS AT LARGE.

Ashley, Geo. F., Paris.
Cutler, Allen R., Preston.
Castle, H. A., Pocatello.
Coulthard, G. H., Idaho Falls.
Cline, C. M., Idaho Falls.
Fisher, Ray H., Rigby.
Hyde, George E., Rexburg.
Harshbarger, M. M., St. Anthony.
Hollister, T. C., Idaho Falls.
Hanmer, C. F., Salmon.
Murphy, A. E., Salmon.
Poole, F. H., Pocatello.
Pendleton, G. W., Idaho Falls.
Ray, D. C., Malad City.

UTAH.

Officers: President, F. W. Taylor, Provo; First Vice-President, R. A. Pearse, Brigham City; Second Vice President, W. R. Tyndale, Salt Lake City; Third Vice President, H. C. Robinson, American Fork; Secretary, W. B. Ewing, Salt Lake City; Treasurer, J. G. Harrison, Salt Lake City.

MEMBERS OF THE UTAH ASSOCIATION AND COMPONENT SOCIETIES.

The following list includes the members of the State Medical Association in good standing at the annual meeting of 1910:

CACHE VALLEY MEDICAL SOCIETY.

Adamson, H. A., Richmond.
Budge, D. C., Logan.
Budge, E. S., Logan.
Budge, T. B., Logan.
Campbell, H., Logan.
Canfield, C. A., Logan.
Clark, F. E., Logan.
Cutler, A. R., Preston, Ida.
Cutler, F. H., Hyrum.
Emery, G. C., Preston, Ida.
Eliason, P. W., Hyrum.
Merrill, P. R., Welsville.
Smith, R. J., Colliston.
States, G. W., Franklin, Ida.
Reynolds, F. O., Logan.
Parkinson, W. B., Logan.
Parkinson, W. B., Jr., Lewiston.

DAVIS COUNTY MEDICAL SOCIETY.

Heath, C. J., Layton.
Howells, T. J., Bountiful.
Ingram, W. F., Kaysville.
Keeler, B. L., Bountiful.
Morton, J. E., Kaysville.
Stringham, Bryant, Woods Cross.
Whitlock, W. A., Layton.

OGDEN MEDICAL SOCIETY.

Allen, James, Ogden.
Brick, Samuel L., Ogden.
Baker, Geo. W., Ogden.
Bates, Edgar, Ogden.
Browning, W. J., Ogden.
Clark, F. G., Ogden.
Condon, A. S., Ogden.
Conroy, E. M., Ogden.
Carnahan, John D., Ogden.
Dickson, Geo. A., Ogden.
Doran, T. C., Ogden.
Forbes, H. R., Ogden.
Fernlund, A., Ogden.
Green, G. W., Ogden.
Gordon, J. S., Ogden.
Gowans, E. G., Ogden.
Ingebretsen, Paul, Morgan.
Joyce, R. S., Ogden.
Morrell, J. R., Ogden.
McCune, R. A., Ogden.
Osgood, C. F., Ogden.
Pearse, R. A., Brigham City.
Powers, H. J., Ogden.
Pugmire, Le Roy, Morgan.
Ries, Anna F., Ogden.
Rich, E. C., Ogden.
Rich, E. I., Ogden.
Rich, Wm. L., Garland.
Robinson, A. A., Ogden.
Smith, E. H., Ogden.

SALT LAKE COUNTY MEDICAL SOCIETY.

Albaugh, C. J., Salt Lake.
Allen, S. H., Salt Lake.
Allison, R. S., Salt Lake.
Anderson, Ross, Mt. Pleasant.
Ashley, R. W., Salt Lake.
Baldwin, S. C., Salt Lake.

Bascom, F. S., Salt Lake.
Beer, W. F., Salt. Lake.
Beatty, I. B., Salt Lake. b
Behle, A. C., Salt Lake.
Benedict, C. M., Salt Lake.
Benjamin, Warren, Salt Lake.
Bird, A. A., Murray.
Bickford, F. D., Salt Lake.
Bowdel, R. A., Salt Lake.
Bower, A. S., Salt Lake.
Calderwood, W. R., Salt Lake.
Cannon, W. T., Salt Lake.
Castleman, A. L., Salt Lake.
Clift, Frederick, Salt Lake.
Critchlow, J. F., Salt Lake.
Donoher, W. D., Salt Lake.
Ellerbeck, W. S., Salt Lake.
Evans, J. O., Salt Lake.
Ewing, W. B., Salt. Lake.
Ewing, Salathiel, Salt Lake.
Ewing, A. C., Salt Lake.
Faust, Elsie A., Salt Lake.
Field, C. J., Salt Lake.
Flood, T. R., Salt Lake.
Feltz, H. B., Salt Lake.
Fisher, R. W., Salt Lake.
Flynn, J. F., Salt Lake.
Gardner, W. L., Salt Lake.
Gemmell, Belle A., Salt Lake.
Gigson, T. C., Salt Lake.
Giesy, J. N., Salt Lake.
Harrison, J. N., Salt Lake.
Harville, C. P., Robinson.
Harding, Geo. F., Salt Lake.
Hammond, E. D., Salt Lake.
Hampton, R. R., Salt Lake.
Hilliard, Ruth, Salt Lake.
Hosmer, A. J., Salt Lake.
Hummer, L. F., Salt Lake.
Humphrey, Ira K., Salt Lake.
Hughes, M. A., Salt Lake.
Irvine, A. R., Salt Lake.
Jones, P. E., Salt Lake.
Jorgenson, H. C., Salt Lake.
Kahn, Sol G., Salt Lake.
Kerr, A. A., Salt Lake.
Kirtley, H. P., Salt Lake.
Laker, L. B., Eureka.
Lane, James, Salt Lake.
Lewis, Alvah, Salt Lake.
Light, G. A., Salt Lake.
Lindsay, D. M., Salt Lake.
Logan, Z. G., Ophir.
Lund, H. Z., Salt Lake.
Lyons, Ira E., Salt Lake.
Mayo, H. N., Salt Lake.
Murphy, A. J., Salt Lake.
Middleton, G. W., Salt Lake.
Miles, Luella P, Salt Lake.
Moormeister, F. M., Salt Lake.
Morton, T. F. H., Salt Lake.
Neher, E. M., Castle Gate.
Odell, T. G., Salt Lake.
Paul, S. G., Salt Lake.
Pinkerton, S. H., Salt Lake.
Plummer, C. G., Salt Lake.
Ploutz, G. B., Salt Lake.
Raley, F. H., Salt Lake.
Rauscher, A., Murray.
Richards, J. S., Salt Lake.
Richards, G. G., Salt Lake.
Richards, R. T., Salt Lake.
Richards, S. L., Salt Lake.
Ridges, A. J., Salt Lake.
Root, E. F., Salt Lake.
Rothwell, W. H., Murray.
Sandbery, C. L., Salt Lake.
Schramm, G. V., Salt Lake.
Scott, H. S., Salt Lake.
Silver, E. V., Salt Lake.
Sharpe, Jno. F., Salt Lake.
Skolfield, Jane W., Salt Lake.
Smart, Geo. L., Salt Lake.
Smedley, R. C., Salt Lake.
Snow, L. W., Salt Lake.
Snow, Clarence, Salt Lake.
Snyder, C. C., Salt Lake.
Sprague, H. B., Salt Lake.
Stauffer, Fred, Salt Lake.
Steele, F. B., Salt Lake.
Stewart, M. R., Salt Lake.
Stookey, W. M., Salt Lake.
Tyndale, W. R., Salt Lake.
Tyree, J. E., Salt Lake.
Van Cott, Ernest, Salt Lake.
Van Cott, H., Salt Lake.
Viko, E., Salt Lake.
Wade, W. A., Salt Lake.
Wilcox, C. F., Salt Lake.
Wilcox, E. E., Salt Lake.
Wherry, C. A., Salt Lake.
Whitney, E. W., Salt Lake.
Worthington, Union, Salt Lake.
Wright, E. S., Salt Lake.

SANPETE MEDICAL SOCIETY.

Gledhill, T. R., Richfield.
Nielson, A. J., Ephraim.
Steiner, J. J., Richfield.

UTAH COUNTY MEDICAL SOCIETY.

Aird, John W., Provo.
Bailey, Steele, Jr., Robinson.
Calder, D. H., Provo.
Christian, J. W., Beaver City.
Clarke, G. W., Springville.
Dryborough, J. W., Eureka.
Dunn, Fredrick, Springville.
Hasler, W. T., Lehi.
Hinckley, E. E., Provo.
Holbrook, H. C., Lehi.
Hullinger, H. C., Vernal.
Hunter, H. C., Milford.
Merrill, H. G., Provo.
Noyes, F. J., American Fork.
O'Donnell, Maude G., Vernal.
Pike, Walter R., Provo.
Pyne, H. S., Provo.
Robinson, H. E., American Fork.
Robison, G. E., Provo.
Robison, J. C., Cedar City.
Stoddard, A. G., Spanish Fork.
Taylor, F. W., Provo.
Warner, W. E., Spanish Fork.
Wherritt, W. R., Heber.
Winter, F. E., Payson.

BOOK REVIEWS

Edited by Kenelm Winslow, M. D.

Practical Medicine Series, Vol. VIII., 1910. **Materia Medica and Therapeutics,** George F. Butler, Ph. G., M. D.; **Preventive Medicine,** Henry B. Favill, A. B., M. D.; and **Climatology,** Norman Bridge, A. M., M. D. Cloth Pp. 380. $1.50. Year Book Publishers, 40 Dearborn Street, Chicago.

In this volume we have a review of the three subjects noted above. In the therapeutic section there is nothing of particular importance which has appeared within the past year except Erlich's "606," and this is too new a remedy to have a recorded history. The successful effect of alcohol injected into the root of the inferior maximillary division of the fifth nerve for the relief of facial neuralgia receives considerable attention. The results are so favorable that operation is now rarely required. It is shown by Koplik that arsenic often is extremely harmful in chorea and it is urged that whenever arsenic is given in large doses that the urine be frequently examined for albumin, its appearance test being the best warning to stop the drug. The great therapeutic value of carbon dioxide snow in the cure of warts, lupus, nevi, moles and acne rosacea is discussed. The comparative value of antiseptics for use in the mouth has been worked out by Miller, who finds that a 1 to 200 solution of either benzoic or salicylic acid surpasses all the rest and kills microorganisms within 2 minutes in the mouth. Williams' work on radium apparently proves it an efficient curative agency in malignant growths of small size, surpassing the X-ray. The volume is well up to the high average of this series and is a valuable resume of the subjects treated.

Winslow.

The Principles of Pathology. Vol. I, General Pathology. By J. George Adami, M. A., M. D., LL. D., F. R. S., Professor of Pathology in McGill University, Montreal. New (2d) edition, Thoroughly Revised. Octavo, 1027 pp., With 329 Engravings and 18 Plates. Cloth, $6.00 Net. Lea & Febiger, Publishers, Philadelphia and New York, 1910.

The first edition of this excellent and commendable work was revised in these columns last year. In the present edition extensive changes have been made. Some sections have been rewritten, others rearranged and the latest developments incorporated. Every topic has been revised to date. A number of diagrams and plates have been added which materially assist in comprehending the subject matter. The newer work upon ultramicroscopic causes of disease has been placed in an appendix. Every student of medical science will find this book interesting and profitable reading. Simpson.

The Modern View of Syphilis and Its Treatment. By Gustav Baar, M. D. (Vienna), Member German Congress for Internal Medicine, etc. Cloth. Pp. 285. D. Appleton & Co., New York and London.

This book was written by one of our own men, Dr. Baar, of Portland, Ore. We are pleased to see men from this section of the country making contributions to American medical literature. The book is a careful set of notes on cases observed by the author. It gives the patient's history and change in symptoms day by day in puzzling form of syphilis, citing actual cases of syphilis of the brain, spine, circulatory apparatus, liver, kidneys, spleen, pancreas, stomach, rectum, the blood and latent cases. Wasserman's sero-diagnosis is given considerable prominence, showing its great aid in clearing up obscure histories and diagnoses. The author rightly contends that the Wasserman should be employed far oftener than it is at present, and the diagnostician will be rewarded with a positive reaction in many cases. The chapter on local and general treatment is rather brief. It mentions ointments, powders, inunctions, internal medicines and the injection of the soluble and insoluble salts of mercury. We are surprised that no mention is made of Ehrlich's "606" which, while not a panacea for syphilis, is truly a remarkable preparation. The book shows careful study and observation of an exceedingly difficult class of cases to diagnose and the author is to be commended for his thoroughness.

PEACOCK.

An Anatomical and Surgical Study of Fractures of the Elbow. By Astley P. C. Ashhurst, M. D., of the Medical Department, University of Pennsylvania. Imperial octavo, 163 pages, with 150 illustrations. Cloth, $2.75, net. Lea & Febiger, Philadelphia and New York, 1910.

This is a subject more often neglected than not. The patient is usually told that some limitation of motion ordinarily follows a fracture of the elbow. With this forecast, diagnosis is naturally not as careful as it should be and treatment is carried out along routine lines without particular reference to the individual case. In his monograph, Ashhurst shows the great variety found in fractures of the elbow. Many case histories are given to show how much better the prognosis might be with improved diagnosis and technic. The many X-ray plates and photographs are indispensable and prove the points made. If generally read this book should be the means of materially lessening the number of stiff elbows.

HOOKER.

Obstetrics. Practical Medicine Series. Vol. V., Series 1910. By Joseph B. De Lee, A. M., M. D. Prof. of Obstetrics, Northwestern University Medical School, and Herbert M. Stowe, M. D. The Year Book Publishers, 40 Dearborn St., Chicago. Cloth, 230 pp., $1.25.

This little volume gives a review of various articles by authorities in the obstetrical field during the past year, which cover procedures and opinions that are new or modified. It is of value for its completeness and conciseness and also for the criticisms interspersed by so competent an editor and teacher as De Lee. The subject is considered under four parts. Part I, pregnancy; Part II, labor; Part III, puerperium; Part IV, the newborn. In reading some of the views held on certain of the subjects treated one is struck with the divergence of opinion held by different authorities on obstetrics. References to the original articles by the numerous authors from which extracts have been taken greatly increase the value of this little book.

LAZELLE.

The Prevention of Sexual Disease. By Victor G. Vecki, M. D., Ex-President of San Francisco German Medical Society; Member of American Urological Association, Etc. Cloth. Pp. 129. The Critic and Guide Co., 12 Mt. Morris Park West, New York City. $1.50.

While a host of works on sexual matters has of late appeared, following a change of sentiment permitting a free discussion of such matters, yet the present volume has a raison d'etre because it offers practical solutions. Segregation of prostitutes in order to secure proper control and supervision of them is advised, and some very convincing figures are given to show the results of nonsupervision as compared to regulation of prostitution in various countries. The author believes prostitutes to be an unfortunate necessity and that they should be cared for humanely rather than treated as criminals. He believes greatly in educating them how to avoid disease. In relation to personal prophylaxis, he is even more precise in preventive measures. Brushing aside all moral lectures as well meant, but generally ineffectual, he describes a kit with which the enterprising but sophisticated modern may toy with the preistesses of venus and yet escape unharmed. Moreover, full directions are given for using the same. The instance of 256 sailors in our navy who followed such directions and yet indulged in the pleasures of foreign ports without a single mishap is astonishingly convincing. The prophylactic sexual kit should be popular. Notwithstanding the complications of the subject and the innumerable objections which come to mind, the practical suggestions of the author appear to be in the main right and sensible. The general tone and style of the book is good and worthy of being and being read.

WINSLOW.

Diagnosis and Treatment of Diseases of Women. By Harry Sturgeon Crossen, M. D., Professor of Clinical Gynecology, Washington University, Gynecologist Washington University Hospital, etc. With 700 Illustrations. O. V. Mosley Medical Book and Pub. Co., St. Louis, Mo., 1909.

This second edition of Dr. Crossen's book has been enlarged and revised, two hundred pages of text and fifty new illustrations having been added, the subjects receiving the greatest attention being those on pelvic inflammation, and tubal pregnancy. The last chapter is devoted to medico-legal points in gynecology, embracing the subjects of rape, foreign bodies left in the abdomen, transmission of venereal disease, testimony in coroners' cases, malpractice suits and criminal trials. The work is well illustrated, the author using over 270 original illustrations and 470 taken from the works of well known authorities.

WILKINS.

Practical Medicine Series. Vol. VII. **Pedriatrics.** Isaac A. Abt, M. D., and **Orthopedic Surgery,** by John Ridlon, A. M., M. D. Series 1910. Cloth, 252 pp., $1.25. The Year Book Publishers, 40 Dearborn Street, Chicago.

The chapters on pedriatrics contain reviews on all the important literature of the year. In addition to reviews on hygiene, feeding, gastro-intestinal disorders, and many other subjects, are reviews on pyelitis, orthostatic albuminuria, vaccine theraphy and poliomyelitis, which have been rather prominent in the literature of the past year. This volume contains the high standard of previous years.

MANNING.

The section on orthopedics presents, with comments by the editor, the more important contributions of the past year. As usual, the comments of the editor are almost as helpful and quite as entertaining as the matter he is reviewing.

FASSETT.

The Physicians' Visiting List for 1911. With the present issue The Physicians' Visiting List enters upon the 60th year of its existence. The price for 25 patients per week is $1; for 50 patients, $1.25; for 75 patients, $2; for 100 patients, $2.25. Perpetual edition, for 1,300 names, $1.25; for 2,600 names, $1.50. P. Blakiston's Son & Co., Publishers, Philadelphia.

The Physicians' Pocket Account Book. By J. J. Taylor, M. D., 212 pp. Leather. Price $1.00 postpaid. J. J Taylor, publisher, 1405 Walnut Street, Philadelphia, Pa.

The especial feature of this book is a system of accounts whereby each transaction can be recorded in a moment's time in plain language, so that it is strictly legal as evidence in court without personal explanation, and so arranged that any patron's account can be ascertained on demand without any posting. There is only one entry of each transaction, and this in such a form that no posting is ever required.

DIRECTORY OF MEDICAL SOCIETIES

Name. — **Meetings Held.**

American Medical Association........................... June 27, 1911—Los Angeles, Cal.

IDAHO.

Idaho State Medical Association................1911—Boise
President, J. W. Givens, Orofino
Secretary, E. E. Maxey, Boise

Kootenai-Bonner-Shoshone Counties Society................
President, ——————
Secretary, J. H. Shephard, Coeur d'Alene.

North Idaho District Society................................
President, J. N. Clarke, Moscow.
Secretary, Joseph Aspray, Moscow.

South Idaho District Society............Jan. 19, 1911—Nampa
President, C. L. Dutton, Meridian.
Secretary, R. L. Glase. Boise.

Twin Falls County Society ...... First Tuesday—Twin Falls
President, W. F. Pike, Twin Falls.
Secretary, J. S. Purdy, Twin Falls.

OREGON.

Oregon State Medical Association.............1911—Portland
President, F. W. Van Dyke, Grants Pass.
Secretary, C. S. White, Portland.

Baker County Society...
President, J. P. Hayes, Baker City.
Secretary, C. G. Patterson, Baker City.

Central Willamette Society..................................
President, W. H. Dale, Harrisburg.
Secretary, H. J. Kavanaugh, Albany.

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Secretary, D. H. Ransom, Clarkston.

Benton County Society ....Prosser
President, C. C. McCown, Prosser
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Central Washington Society ....Second Tuesday—Wenatohee
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British Columbia Medical Association..... 1911—Vancouver
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The Journal of the State Medical Associations of Oregon, Washington, Idaho and Utah
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DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF THE PACIFIC NORTHWEST
Subscription Price $2.00. In clubs of twenty or more $1.00.

Entered March 14, 1903, at Post Office, Seattle, Wash., as Second Class Matter, under Act of Congress of March 3, 1879.

VOL. III. New Series. FEBRUARY, 1911 No. 2

ORIGINAL CONTRIBUTIONS

COLON BACILLUS INFECTION OF THE URINARY TRACT.*

By C. B. Lyman, M. D.,

DENVER, COLO.

It is held by many observers that the urinary tract is not especially liable to bacterial infection, except when the resistance or vitality of the various membranes lining it is lowered either by local or constitutional disturbances (but they all except the urethra), and that the bladder is especially protected from such infection. They cite in support of this theory the fact that one may have tuberculous infection of the kidney, which is continuously pouring its infectious material into the bladder which usually does not show evidences of infection for a long period and in some cases may escape entirely. It is also cited that gonorrheal infection of the bladder does not easily take place.

While this seems to be true with regard to infections by the tubercle bacillus and the gonocococcus, experience seems to demonstrate that the urinary tract is especially liable to infection from the colon bacillus, as we see many cases of infection from this organism arising in patients who have had no previous disturbance either with the kidney pelvis or the bladder. It is quite natural to suppose that those, who have had previous local disturbances or those whose resistance is lowered as a result of general diseases, are more liable to infection by this organism as well as by others, and experiences prove this to be true. The portions of the urinary tract most susceptible to this infection are the pelvis of the kidney and the bladder.

Whereas infection of the urinary tract by the tubercle bacillus, streptococcus and staphylococcus is thought to take place through the blood channels more commonly than by extension from neighboring structures, the opposite seems to be true in the case of the colon bacillus. Colon bacillus infection of the kidney pelvis and the perinephritic tissue is almost always secondary to an acute appendicitis or acute or chronic colitis and, in face of the fact that we very seldom find colon bacillus infections in locations far distant from the natural habitat of this organism, it is quite reasonable to infer that direct extension is the usual mode of infection. I have never seen a colon bacillus infection arise in a location where its presence could not be explained in this manner. I have seen several cases of supposed colon bacillus infection of the kidney and surrounding tissue, two in which the infection was demonstrated by cultures made from the contents of the pelvis of the kidney, and one where a culture made from the fluids found in the perinephritic tissue demonstrated its presence. In this case the pelvis of the kidney was not opened.

In those cases which I class as supposed cases of kidney infection, cultures from the urine secured from the bladder were positive and clinical symptoms were present which seemed to prove involvement of the kidney. To this class belongs the following case:

Case 1. Mabel G., aged 5 years, operated upon for acute gangrenous appendicitis. Appendix ruptured and abscess formation existing. Symptoms were relieved by operation and the patient was pursuing a satisfactory course. The temperature and pulse rate were practically normal when, on the tenth day, they began to rise; there was nothing to be found locally to account for the symptoms. Two days afterwards there was slight tenderness in the region of the right kidney; a sample of the urine was obtained per catheter and a culture was made which gave us a pure colon bacillus growth.

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*Read before the Sixteenth Annual Meeting of Utah State Medical Association, Salt Lake City, Utah, Oct. 3-4, 1910.

Treatment was instituted along the lines I will speak of later, which resulted in prompt relief and after two weeks a culture made from the urine proved to be negative.

Case 2. This case was one seen before vaccine therapy came into use. A child, aged 8, a doctor's daughter, was operated upon for acute appendicitis, operation being done during the early hours. The appendix was very acutely congested and swollen and the mucous membrane was dark, evidently the early stage of a gangrenous condition. No drainage was instituted and a prompt subsidence of all symptoms resulted. On the second day there was a sharp rise in the temperature, accompanied by pain in the region of the left kidney, but upon examination there was very marked tenderness over the region of the right kidney. Infection of the kidney or perinephritic tissue was the diagnosis made and immediate operation was decided upon as being the safest procedure. Upon reaching the perinephritic fat tissue we found that it had a decidedly bad look, was waterlogged with serum, if I may use that expression. No pus was found. As this tissue showed distinct evidence of infection and the symptoms had only been present for a few hours, it seemed best to simply drain this area and not open the kidney. Some of the serous fluid was collected and a culture made, which proved to be a colon bacillus infection. The drainage instituted gave immediate relief to the symptoms and recovery was complete.

Case 3. A boy, aged 10, with acute, suppurative appendicitis, was operated upon and drained. Symptoms did not subside as they should have done and daily search was made to find the location of a supposed secondary or supplementary infection. It was finally decided that we had either a subphrenic or pleural infection. Operation was done and a colon bacillus infection of the pleural cavity was found. The urine showed presence of colon bacilli. Treatment was instituted as in Case 1 and recovery was complete, the urine soon becoming normal.

In the complexity of symptoms in this case it was impossible to isolate any which could be directly traced to the kidney infection. I believe that kidney infection by this organism often takes place in cases of acute and chronic colitis, though I have not had the opportunity of demonstrating it in many cases. Within the last year I have seen one case in which I feel that such infection was clearly proven.

Case 4. Mrs. T., aged 54, was taken with an attack of acute colitis, probably of the ulcerative type. After an illness of three or four weeks I was asked to see her in consultation on account of distressing bladder symptoms, frequent and painful urination. The urine was acid, contained blood, renal epithelium, hyaline and granular casts. A pure culture of the colon bacillus was obtained from a catheterized specimen. Again similar treatment was carried out and soon improvement in the urinary condition took place, but death finally resulted from inanition, after about eight weeks' illness.

It seems reasonable to suppose that some of our colon bacillus infections of the bladder are the result of a descending infection from the kidney, inasmuch as the kidney lies in close proximity to the colon on both sides, and infection of this organ by direct extension would be much easier than direct extension to the bladder. This hypothesis is, however, hard of proof, owing to the fact that, when infected by this germ an organ subject to natural and continuous drainage does not necessarily give us localizing symptoms.

There seems to be a diversity of opinion as to the importance of the part played by the different bacteria in connection with renal infections. All agree that the colon bacillus is most frequently present, either alone or in conjunction with other microorganisms as the staphylococcus, streptococcus, pneumococcus, typhoid bacillus or gonococcus. But all are not agreed on the question as to whether or not it plays the most important part in the production of the symptoms present.

Guyon and other French observers believe that it is the cause in a large percentage of the cases. Other observers claim that it can only produce a mild type of infection and that severe infections are always the result of the microorganism found in conjunction with it, and claim that it may be present for a long time without producing any infection. Inasmuch as there is this great diversity of opinion, it would seem reasonable to look upon the colon bacillus as a very important factor in infections of this organ at least.

Bacterial infections of the bladder are very common and many microorganisms are found. The colon bacillus is one of the most frequent causes of cystitis and, in fact, the cause of most cases where we have a cystitis present with an acid urine. It is believed by many that this organism will not infect a bladder otherwise normal. That supposition is difficult of positive proof, as it seldom happens that we see our patient and examine the bladder before the infection takes place.

There are three possible avenues of infection in these cases: Hematogenous, descending infection from the kidney and, lastly, direct extension from the intestine or rectum. I think that direct extension and descending infection from the kidney are the most common methods. I have not investigated the question of the coexistence of renal and bladder infection in these cases, as I have not considered ureteral catheterization a justifiable procedure, owing to the danger of carrying microorganisms from the bladder into a normal kidney. This danger may be slight, if proper methods are preserved, still some danger exists under all circumstances.

The symptoms in cystitis of this origin do not differ from those found in infection from other microorganisms. The cystocope shows a greatly congested bladder wall with flakes of pus floating in the fluid contained in the bladder and lying on the bladder wall. In many cases blood is to be seen also. Cultures can easily be made from the urinary sediment.

The treatment of these cases is the important item and, although many drugs are advised for internal use, there is only one which I have been able to satisfy myself has any particular value and that is urotropin. Of the efficacy of this drug I have absolutely no question, but I believe that we must use it in larger doses than recommended, at least in some of our cases. On the other hand, there are cases where small doses produce considerable bladder irritation, due to the fact that it increases the acidity of the urine. This may be overcome by the administration of some alkali along with it, the tartrate of lithium being a good one. It has been my custom to administer the drug in 5-grain doses with an equal amount of tartrate of lithium at frequent intervals, until the patient receives from 25 to 35 grains daily, watching the urinary reaction and always keeping it acid. Bladder washing with various solutions has not proved itself to be of much value in my hands and I have tried most of the drugs recommended. It serves only one purpose, that of a cleansing process.

In addition to the use of urotropin I have found vaccine therapy to be of the greatest efficiency. An autogenous vaccine should always be used and if we find a mixed infection present, the microorganisms should be isolated and a separate vaccine made from each. It has been my habit to administer 12,000,000 at the first dose, 24,000,000 at the second and increase each dose by 5,000,000 to 10,000,000 thereafter until a maximum of 75,000,000 has been reached, these administrations being made at five or six-days intervals. I have rarely seen much reaction following its administration. In two cases my patients had a large increase in the local tenesmus following the administration of an excessive dose, and this recurred each time an extra large dose was administered.

Case 5. This patient was a lady, aged 70, who had been in bed for 11 weeks before I saw her, suffering from intense pain upon urination, which act was of very frequent occurrence. She was running a temperature slightly above normal, had lost much sleep and was altogether in bad shape. Bladder washing had been carried out, along with the administration of various drugs. Cystoscopic examination made under a general anesthetic showed the whole bladder wall very much congested but most markedly so at and about the vesico-urethral orifice, which area bled slightly. This bleeding may have been produced by the urethral dilatation which was necessary to allow the use of a No. 32 French short cystoscope. The ureters were not catheterized. The urine was acid and contained considerable sediment. A culture proved our infection to be a pure colon bacillus. A vaccine was made and administered as I have advised and urotropin was given freely. Improvement took place at once and in three weeks the woman was out of bed and free from all symptoms, though the urine still showed a few colon bacilli. Treatment was continued until no growth could be obtained from the centrifuged sediment.

In this case each time we increased the dosage of the vaccine too much she had an increase of her tenesmus and urinary frequency.

Case 6. Mrs. M., aged 72, demonstrated very conclusively the efficacy of urtropin. She was a devout Christian Scientist and had been under their care for 5 weeks when she fell into my hands. At this time she had an extensive infection of the abdominal wall with profound constitutional symptoms. Free incisions were made under a local anesthetic and the infected area freely drained. From the odor of the pus it was evidently a colon bacillus infection and I am inclined to believe it was not at that time a mixed infection, although no culture was made that day. No source of the infection could be determined and it was entirely external to the superficial fascia. The local symptoms improved and the infected area was entirely well in three weeks. She continued to run a high temperature, however. Shortly before the infected area ceased to drain she complained of vesical irritation and frequent urination. A culture made from the urinary sediment gave us a mixed infection of the colon bacillus and staphylococcus. A vaccine was made from each of them and administered. The local infection promptly ceased. The bladder continued giving her trouble and her temperature remained high. After three weeks of this treatment urotropin was added, giving 25 grains daily and in 24 hours the temperature was lower and it continued to decline daily until it reached normal in about seven days. The bladder symptoms improved; from that time on her convalescence was rapid and she made a complete recovery.

The question of the value of vaccine therapy in these and other infected conditions seems to be one on which there is a difference of opinion. It is unquestionably true that we see many cases where vaccine is administered that do not recover any more rapidly than another similar case does without it, but that does not prove its inefficacy. I feel that we should avail ourselves of this method of therapy in these cases, as well as in other forms of infection, but not to the exclusion of other lines of treatment.

In this connection I would like to refer to a case occurring in the practice of one of my friends. This patient, a man, had a straight colon bacillus cystitis. A vaccine was made and administered along with other lines of treatment and a recovery took place. Since that time he has had several recurrences of the infection, each one of which has been relieved as soon as vaccine was used and this without any other treatment. This case illustrates a fact well established, that colon bacillus infection of the bladder, having been once established, is quite liable to recurrence.

DISCUSSION.

On motion of Dr. R. S. Bascom it was voted that Dr. Lyman be given a vote of thanks for the interesting and instructive paper which he read.

Dr. A. J. Hosmer, who was on the program to open the discussion on this paper, not being present, the chairman announced that it was now before the Association for discussion.

Dr. R. S. Joyce, of Ogden: The paper was very interesting, and reminds me of some rather obscure abscess formation which, too prone to be attributed to tuberculosis, were probably cold abcesses, some in the regions of the kidney and others in the pleural cavity which I have seen following operations. No doubt they are often caused by the colon bacillus. Whether, as the doctor suggests, that gives the case malignancy or its dangerous attitude, might be questionable, or whether it is not a mixed infection on top of the primary infection. More important, however, than that is the care with which these cases are handled, that is, the care of secondary infection after they are opened. These abscesses are of a comparatively simple character, often opened under adverse conditions, and the secondary infection comes on the heels of the primary infection which may have been colon bacillus. I think the doctor's idea of the use of vaccine therapy is excellent. I think that urotropin in even larger doses than the doctor suggests could be used to advantage.

Dr. F. S. Bascom: I was very glad to hear the doctor's suggestion with regard to the question of the colon bacillus infection as a cause of peri-nephritic abcess. I feel that perhaps in the experience of all of us conditions arise where secondary abscesses have existed, where the cause thereof has been overlooked, and that if we had better knowledge of this infection we might have been able to add something to the doctor's experience in that line. Personally, I have had no experience which would lead me to verify what he has told us, but I have no doubt these infections do occur through this source.

Dr. Ralph Richards: I can recall one case that I believe corroborates the possible source of infection arising from the colon. It was a case in the German Hospital, Philadelphia. The man was a soldier who had been in one of the camps during the Spanish-American war and had had attacks of dysentery. He had been laid up with a fever and pain in the side. The doctor made a free incision and drained away a pint of colon pus. I think it was one of those cases falling under the heading of infections arising from colon conditions.

THE OCULAR MANIFESTATIONS OF ARTERIOSCLEROSIS AND THEIR DIAGNOSTIC AND PROGNOSTIC SIGNIFICANCE.*

By C. A. Veasey, A. M., M. D.
SPOKANE, WASH.

Permit me first to thank you for this privilege of addressing you this evening. It is always more or less difficult for one whose practice has been along special lines to address an audience composed largely of general physicians upon a subject that does not, on the one hand, savor too much of his own line of work or, on the other, discuss facts so generally known that they become tiresome in their repetition. Many subjects suggest themselves under such circumstances and the one I have selected for presentation to you this evening is on the border line between special and general medicine; requiring more or less knowledge of the normal ophthalmic structures in order that the significance of the pathologic findings may be properly interpreted in their bearing upon general disease. I shall not be able to offer you much that is new but with your kind permission I will endeavor to make a brief resume of the subject as corroborated by my own clinical experience.

General arteriosclerosis is a condition readily recognized. It is characterized by a thickening of the peripheral vessels, hypertrophy of the left ventricle, increased blood pressure and a very slight amount of albumin in the urine. The hypertrophy of the left ventricle is usually distinguished by the outward displacement of the apex beat, the hard thudding first sound and the accentuated aortic second. The amount of albumin found in the urine is not only small but varies greatly from time to time.

If this group of symptoms be discovered in any individual it is not in the least difficult to recognize the condition but it is unfortunately too late for much to be accomplished by any known method of treatment. If, then, there are symptoms by which this condition may be recognized in its earliest stages, it behooves us to take cognizance of these symptoms and bend every effort toward their recognition, as it is only in this period of the disease that treatment can accomplish the most good.

It is a well known fact that arteriosclerosis does not necessarily involve the vessels of the whole body at the same time or, rather, that the disease does not always progress with the same rapidity in different portions of the body. Because of this, Stengel[1] has suggested that the causes productive of the affection tend to more rapid progress in some parts than in others, and we may have, therefore, the brunt of the disease manifesting itself in one patient in the brain, in another in the heart and in a third in the kidneys. In as much as the most serious form of the affection is that in which the smaller vessels are involved, it is most important both from a diagnostic and prognostic standpoint to recognize at the earliest possible moment these early changes in the minute vessels. When the changes may be detected in the larger vessels, as the radials, the disease has advanced beyond the stage in which the most good toward controlling it could have been accomplished. The retinal arteries being small, terminals brought into actual view by means of the ophthalmoscope afford us an opportunity for observation and study that does not exist in any other organ of the body. We are, therefore, frequently enabled to detect the most minute changes long before such changes may be detected by touch in arteries situated elsewhere and, according to Osler[2] and Stengel[3] from the standpoint of clinical medicine and to Raehlmann[4], [5], Hirschberg[6], Marcus Gunn[7], [8], Gowers[9], Rohmer[10] and Coates[11], of Europe, and to Friedenwald[12], deSchweinitz[13], [14], [15], [16], Alleman[17], Woodruff[18], [19], Bruner[20], and others of this country, from the standpoint of ophthalmology, the very earliest stages of a general arteriosclerosis are oftentimes first discovered from an ophthalmoscopic examination.

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*Read before the City and County Medical Society, Portland, Ore., Jan. 4, 1911.

I do not wish to convey the impression that all cases of general arteriosclerosis can be so detected in the earliest stages. In many cases the earliest stage of the disease does not manifest itself in the retinal vessels and cannot be detected there until after it has become well advanced in other portions of the body. On the other hand, when the changes to which I refer and which will be described later in detail are observed, they can mean only one thing, namely, that arteriosclerosis is present in the retinal vessels and that it may be either the very beginning of the affection, the latter being primary in the eye, or simply an ocular manifestation of a disease which has already become general throughout the body.

The fundus signs by which the condition of arteriosclerosis may be recognized are, according to deSchweinitz, the *suggestive* and the *pathognomonic*, and I can do no better than to give a description of these signs in his own words.

"The suggestive signs include uneven calibre and undue tortuosity of the retinal arteries, increased distinctness of the central light streak, an unusually light color of the breadth of the artery, and alterations in the course and calibre of the veins. The pathognomonic signs include changes in the size and breadth of the retinal arteries of such character that a beaded appearance is produced; distinct loss of translucency; decided lesions in the arterial walls, consisting of white stripes in the form of perivasculitis; alternate contractions and dilatations of the veins and particularly—and this is the most important of the signs— indentation of the veins by the stiffened arteries in the same manner as a solid rod would indent a rubber tube where lying across it. Sometimes the vein is simply flattened slightly at the point of crossing, or merely pushed aside, or its calibre is contracted so that beyond the point of crossing there is an ampulliform dilatation. In addition to these well known signs, there may be changes in the venous walls, so that they are bordered with white stripes, and the veins may be exceedingly tortuous and contain varicosities. Finally, there are edema of the retina in the form of gray opacity around the disc or following the course of the vessels, hemorrhages manifesting themselves as linear extravasations, or roundish infiltrations, or sometimes assuming a drop-like form."

Probably among the earliest recognizable signs are the corkscrew appearance of some of the smaller arterial twigs, notably those in the immediate region of the macula. Or it may be that one or more of these corkscrew twigs arise from a larger vessel apparently healthy, simply showing that the whole artery is not affected.

It may be observed also that in some portion of the fundus a vein in contact with an artery will appear more or less flattened. This is due to the slight compression of the vein by the artery, the pressure not yet being sufficiently great to produce dilatation beyond the point of contact. According to de Schweinitz, this is more frequently observed first in the inferior temporal retinal vessels. The optic disc, or nerve-head, presents a dull red appearance differing somewhat from an ordinary congestion, in that it is less frank. At a somewhat later date there may be marked indentation of the veins where crossed by arteries, with considerable dilatation of the former beyond the point of pressure, perivasculitis, "silver wire" arteries and hemorrhages.

It is of considerable importance to know at what age these signs may be first observed. Clinical experience has taught each of us that they are not confined to the eyes of the aged. Indeed, it is not infrequent to make ophthalmoscopic examinations of persons at least seventy years of age and to find the retinal vessels perfectly healthy. It is, therefore, not age alone that produces the condition. According to the late Mr. Gunn, it is most apt to make its appearance between forty and fifty, though my own experience is in accord with that of deSchweinitz when he states that he has seen it at an earlier age.

I cannot in this paper discuss the various causes of arteriosclerosis. Sufficient is it to say that these vascular changes are probably brought about by the production of toxins, a process that has very likely been going on in the body for a long period until degeneration in various organs has been produced, because of the inability of the excretory organs to eliminate them. In many patients a distinct history of gout, rheumatism or syphilis may be obtained and in others there may be a history only of some form of "indigestion." The patients are, as a rule, of sedentary habits and fond of "good living" or it may be that they have been greatly overworked, have been under tremendous nervous strain or present an heriditary tendency. Just what effect these poisonous substances have in the vascular system is not very clearly understood, but they produce finally high blood pressure and the atheromatous changes which I have previously described.

Just here I would like to refer for a moment to the question of blood pressure in these conditions. Personally I believe it to be of great importance to test this pressure in all suspected cases. It has been found that in many patients affected with retinal hemorrhage[21], in certain cases of glaucoma[22], [23], [24], in which, as you know, there is an increase of the intraocular tension and in some other ocular affections, the blood pressure has been observed to be above normal. In well advanced arteriosclerosis the blood pressure will also be found to be elevated. I believe, therefore, that all suspected cases, manifesting in the slightest degree any of the ocular signs to which I have referred, should be carefully tested for both the systolic and diastolic pressure. According to competent clinicians the systolic pressure in healthy young adults varies between 100 and 140 mm. while the diastolic pressure in the same individuals varies between 80 and 90 mm. Should a much higher pressure than this be found, it is exceedingly suspicious and, taken into consideration with the presence of some of the suggestive signs, would seem to indicate an early stage of the affection under discussion.

The very great significance of these ocular findings may be better understood when I repeat that they may be among the very earliest symptoms and at a time when most good can be accomplished in the treatment of the disease. Internists have not, as a whole, though there are many notable exceptions, recognized the importance of careful ophthalmoscopic examinations in these cases. If we wait until the condition can be detected by palpation of the pulse, a displacement of the apex beat with the hard thudding first sound and the accentuated aortic second sound, we have waited until the time has passed when the greatest benefit could have been accomplished. Stengel is among those recognizing the value of ocular examinations in such cases when he says, "The ophthalmoscope may reveal the positive evidences of vascular disease before the disease (arteriosclerosis) has become marked." And, furthermore, he says, referring to the question of diagnosis of the condition, "If the four symptoms I have named (the condition of the pulse, the character of the heart sounds, the increased tidal wave on the sphygmogram, and the elevation of tension recorded by the sphygmomanometer) were found in arteriosclerosis *alone,* the problem of diagnosis would be greatly simplified, but this is not the case. There are numerous and varied conditions of the system, organic and nervous in origin, that elevate pressure nearly constantly, and in which arteriosclerosis has no part, except, perhaps, as a consequence. Any one of these conditions may occasion the four signs I have discussed."

On the other hand, as pointed out by deSchweinitz, whom I have so frequently quoted, the ocular signs referred to, as discovered by ophthalmoscopic examination, are produced by no other condition than the continuous high arterial tension of arteriosclerosis. A study of the eyeground, therefore, is of the utmost importance, both for the physician in making his diagnosis and for the patient in that he may be placed early under treatment.

The question naturally arises, are these various early fundus changes observed only in the cerebral type of arteriosclerosis or are they also found in other types? I would reply that, in my opinion, they are found in all types. Occasionally an examination fails to show any change but in most instances if careful and, if necessary, repeated examinations be made, the so-called suggestive signs will be observed. Certainly, an ophthalmoscopic examination should never be omitted in investigating this condition. It should be borne in mind, however, as pointed out by Friedenwald, that "The degree of the variations in calibre of the retinal arteries does not bear a definite relation to the signs of arteriosclerosis in other parts of the body" yet, as stated by Coates, to which I think we must all agree, "Although this fact detracts somewhat from the value of the ophthalmoscopic evidence of general vascular disease, it remains the best indicator of the state of the vessels generally that we possess." In other words, the ocular signs when present are always indicative of either local or general absence of general arteriosclerosis.

We now come to the question of the prognostic significance of the ocular signs, which divides itself naturally into that relating to the eye itself and that relating to the general organism.

The chief danger to the integrity of the eye itself is the possibility of hemorrhages. They may be of various sizes and shapes, depending upon their location in the retinal layers. If situated in the nerve fibre layer, they are apt to be fimbriated or feathery in appearance; if in the deeper layers, the shape is usually oval or irregular. They may be numerous and in the immediate neighborhood of the nerve head or of very fine punctate character occupying the macular region, in the latter instance a very few producing a great diminution of the central visual acuity. Large hemorrhages are also sometimes found in this region. Occasionally there will be observed large, irregular extravasations between the retina and vitreous. These are the so-called subhyaloid hemorrhages. The bleeding may be due to diapedesis because of the tremendous pressure of the vesssls or to actual rupture of the vascular coats. Wherever or however they occur, they endanger greatly the integrity of the eye. Those observed in the macular region interfere most with central visual acuity, a comparatively small hemorrhage here frequently obliterating half or two-thirds of normal vision. Peripheral extravasations, on the other hand, interfere naturally with the peripheral visual field and the more distant they are from the macular region the less actual disturbance do they cause the patient in his daily avocation. They may become absorbed, leaving more or less atrophic areas or they may extend into the vitreous producing glaucoma or detachment of the retina, thus depriving the eye entirely of its functional activity. The important point is that they always leave the eye in a weakened condition which may mean anything from the slightest impairment of function to complete loss of vision.

Other conditions occasionally observed are retrobulbar neuritis, either acute or chronic, probably due to the disturbance of nutrition of the axial fibres of the optic nerve because of the sclerotic vessels; optic nerve atrophy, as in the case reported by Zentmayer[25] (see also paper by Bull)[26], spasm of the retinal artery[25], [27], thrombosis of the retinal vein, lenticular opacities and recurring subconjunctival hemorrhages. In any patient in whom these latter are observed there should always be made a careful urinary examination, an ophthalmoscopic examination, and the blood pressure should be tested.

In discussing the general prognosis the most interesting feature naturally is the relationship between the retinal condition as revealed by the ophthalmoscope and the condition of the vascular system in other portions of the body. In other words, what is the prognosis as regards life? The signs are certainly indicative of a similar condition in the vessels of the brain and it is the experience of all ophthalmologists that very many of the cases die of cerebral hemorrhage within a short time after the ocular examination has been made, if the latter reveals the later stages of the retinal disease. Moreover, there is an intimate relationship to similar conditions in the kidneys, and the ocular symptoms may be simply those signs suggestive or pathognomonic of arteriosclerosis, death supervening before nephritis becomes fully established; or, if chronic nephritis has become fully established, death may occur before the typical nephritic retinitis becomes manifest.

It is evident, therefore, that the plain duty of the general physician toward his patients is to advise a thorough investigation of the eyes in all suspected cases of arteriosclerosis. The discovery of positive signs in the ocular fundus is as important toward the establishment of a diagnosis as the four clinical symptoms of the disease. Indeed, they are probably more important because, unlike the clinical symptoms, they are not observed in any other condition. It is also the duty of the ophthalmologist when he observes the early symptoms of this disease, as he frequently does, during the course of his ordinary ocular examinations, to advise his patient accordingly, in order that prompt and thorough investigation of the vascular system and the various organs of the body may be made. If this be done, treatment may be instituted at the time when it will do most good and not only vision but perhaps life itself that might otherwise be lost may be preserved for many more years of usefulness.

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Traders' Bank Building.

NON-SPECIFIC PROSTATIC HYPERTROPHY.*

By L. W. Hyde, M. D.

PORTLAND, ORE.

Case 1. E. C., dentist, 40 years of age, referred to me March 6, 1908, by Dr. C. S. Hosmer. Has two strictures, one in pendulous portion of the urethra and one in the prostatic portion. Rectal examination shows an enlarged and irritable prostate. Had gonorrhoea about 6 years ago, since which time has not been reinfected. The symptoms are irritability of the neck of the bladder associated with frequent micturition and nightly rising. Rises sometimes 3 or 4 times at night. After 3 months of intravesical irrigation and prostatic masage, together with care of the strictures, the symptoms entirely subsided, but the prostate remained some larger than normal and more resilient. Six or eight different examinations of smears, sediments and vesical contents failed to reveal any gonococci.

This case had an enlarged prostate after thorough treatment and after all subjective symptoms had subsided. Patient was discharged afterwards with an explanation of his condition.

Case 2. F. H., physician and surgeon, came to me in Oct., 1908, complaining of difficulty in urinating associated with perineal distress after sitting in one position for a long time. Examination of the prostate by rectum showed marked enlargement, resiliency and some tenderness. Intravesical examination showed enlarged and irritable middle lobe. The patient has been married and has never infected wife who has borne him children. Frequent efforts to detect gonococci in discharges were unavailing.

This case improved symptomatically, although at the end of treatment the prostate was still hard and slightly enlarged. This case was probably non-specific.

Case 3. J. D. W,, 35 years old, referred to me in Oct., 1908. Prostate was enlarged and yet not very painful. Under treatment this patient improved but repeated smears did not show indication of specific trouble. He confided to me that he expected to marry soon and wished a final examination of the prostatic discharge. What I had hoped to be final proved preliminary, for I found gonococci and subjected him to more treatment before discharging him. This was undoubtedly specific and almost slipped by me with the classification of non-specific.

Case 4. E. B. P., 45 years of age, sent me by Dr. J. R. Wetherbee, presented on examination a very markedly enlarged prostate associated with pain at coitus. This case could not be given a specific history by any means of investigation and after two or three months treatment, when symptoms subsided and patient felt well, I was compelled to believe that the enlargement was associated with excessive venery rather than venerial infection. The patient recovered normal subjective symptoms though the prostate neither was reduced to normal size or consistency.

Case 5. M. B. R., age 65, presents two large hard, painful, lateral lobes of prostate by rectal examination, with vesical tenesmus and burning on passing water. Gets up frequently at night and is bothered some with dribbling of urine. Intravesical examination revealed swollen and painful middle or superior lobe of prostate. This case was sent to me with the request that I confirm the necessity for removal of the prostate. A short term of treatment completely removed all symptoms, although the prostate remained larger than normal. This was in Feb., 1908 and patient has had no more trouble.

Case 6. Dr. J. H. Bristow called my attention to a very interesting case about two months ago. This was undoubtedly a case of non-specific prostatic hypertrophy. Because of its unusual features it caused me to make a review of my case records. A young man of irreproachable character, under 30, suffered from nocturnal emissions very frequently, was decidedly neurotic and, although married and practising the natural sexual act, suffered frequent emissions and sexual losses. Examination of the gland per rectum revealed a very decidedly enlarged prostate. This was hard and not painful. It was associated with a most unfortunate psycho-sexual condition. I am very much inclined to believe that prostatectomy would be the procedure in this most unfortunate case. It was undoubtedly a case of non-specific prostatic hypertrophy not amenable to any conservative treatment.

Case 7. G. A. N. Aug. 4, 1910, referred by Dr. N. W. Jones. Age 45, weight 160 pounds, family history negative. Personal history, pain in legs, thighs, penis, scrotum and perineum. Rectal examination showed a very sensitive and hardened prostate. Massage of prostate and circumcision removed all of the symptoms and prostate became normal in size and nearly so in consistency. Not giving any specific history, this patient told of spending four or five years as a Mexican ranger, continually on horseback. In Los Angeles he was advised to submit to prostatectomy, but fortunately refused and today is well. He was discharged with the warning that the symptoms might recur. After 10 weeks of suspended treatment he shows no tendency to recurrence. He is feeling exceptionally well, able to attend to business and has no symptoms.

Case 8. Dr. Harry Start called me to see a case of non-specific prostatic hypertrophy. A middle-aged man, well nourished, without venereal history gave a history of bicycle and horseback riding, with all of the symptoms of enlarged prostate. Examination revealed a very sensitive and swollen gland. Under treatment the gland became normal and the symptoms all subsided. Patient has had no recurrence.

Here is a review of eight out of a record of about 200 abnormal prostates which have come under my observation in the last two years. It has set me thinking seriously with regard to the many questions that arise in the treatment of prostates. It is quite common in medical literature to hear of the hypertrophied prostate of advancing years and on the downhill side of life. It is not uncommon to hear of prostatectomies performed by good surgeons upon men who have not reached the summit of manly vigor or who, having done so, are far from stepping over the summit in their travel toward the evening of life.

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*Read before Portland City and County Medical Society, Portland, Ore., Nov. 16, 1910.

NOTE.—The word "non-specific" in this paper is used to means "non-venereal."

Without a careful differential diagnosis should such men be submitted to prostatectomy? Most emphatically *no*. Should such men be submitted to surgical procedure without medical and mechanical interference first? Most emphatically *no*. Out of the list of cases spoken of as having come under my observation, only six have had prostatectomies performed.

When does a specifically enlarged prostate become non-specific? Is it true that hypertrophied prostates of old men are antedated with a specific history which has had its influence on the enlarged gland? How far does excessive venery and reflex sexual excitement influence prostatic enlargement?

Non-specific prostatic hypertrophies are largely due to irritating influences of various kinds. As far as I can tell with the means at my command, a specific hypertrophy becomes non-specific when the specific organisms can no longer be found in urine or smears from the gland or vesicles. These prostates are not surgical but medical and mechanical and should be most thoroughly treated before any thought of operation.

Laparotomies galore have been unnecessarily performed in the name of appendicitis and a normal appendix has been removed for relief of what was really intestinal indigestion. One of the most embarrassing experiences a young surgeon can have is to have a normal appendix pop into the wound and throw the lie in his face. I know what I am talking about, for it is now six years since I did my last appendectomy and I can still see some of the harmless organs looking at me and applying the lie to my ability.

In the name of good surgery and careful diagnosis don't advise a prostatectomy until you are sure. Non-specific prostatic hypertrophies, the smallest number of diseased prostates, form the largest field for the exploit of prostatic surgery. I believe in thorough and intelligent surgical procedures and will operate upon these cases when they need it, but will do my best toward conservatism when possible, radical and most thorough work when needed. If the prostatic case needs removal well and good, but be sure you are right before attempting this most serious of operations.

WHAT MEDICINE HAS DONE AND WHAT IT WILL DO IN THE CONSERVATION OF HUMAN HEALTH.*

By G. W. States, M. D.,

FRANKLIN, IDA.

This paper is not presented as something new or as something you are not better acquainted with than I myself. But there are questions affecting public health, public policies and the profession of such vital importance that they must be told and retold that the public, as well as the physician, may grasp their real significance, their genuine importance. Hence my apology for presenting this time-worn topic.

The present day problem overshadowing and overtopping every other is the great American health problem. The right solution of this will bring more universal blessings upon mankind than any other. As long as man has existed, so long has been disease and as long as man has suffered man has put forth his ministrations of healing.

Crude and grotesque when applied in ignorance and savagery, more definite and certain with the trained and educated, yet they have the same end in view—the alleviation of human suffering.

Medical knowledge has not a superficial foundation; its foundation lies deep in the bed-rock of common knowledge and from times remote has been free to appropriate and absorb to its use any discoveries in any field of scientific endeavor. This reaching out into every field and appropriating scientific truths to its use has given medicine its present high standard of attainment.

It is easy for the lay mind to comprehend the wonderful progress in the mechanical arts. The swiftly moving palace car, the floating palace in mid-ocean with its wireless, the motor car and the flying machine captivate the attention and challenge universal admiration.

Has the science of medicine kept pace with the progress of the age? A close analysis of what has been accomplished in this field will not suffer through comparison. In the very nature of things it is not to be expected that medical progress and health problems could claim public attention in a way other problems do. Medical progress and problems are so wrapped up in the ultra-scientific that it is beyond the comprehension of all except the scholar, the sanitarian and the humanitarian. But there are certain phases of the problems in which the general public should become interested. They must know what can be accomplished in the way of prolonging human life and overcoming the ravages of disease through the avenue of preventative medicine.

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*Read before the Sixteenth Annual Meeting of Utah State Medical Association, Salt Lake City, Utah, Oct. 3-4, 1910.

What medical science has given to the world already is proof conclusive of what awaits to bless the world when the public is educated to the necessity of more progressive health legislation, both state and national. This, though, can never be accomplished without the united and unselfish efforts of the profession in a campaign of general health education. Very little are our legislators influenced by what should be done; they simply want to know how it will affect the vote. If the people make it plain to their public officials, both state and federal, that they demand for themselves and their children as much protection from disease as they do for their horses and cattle, the needed health legislation will not be long deferred.

Sanitary science has demonstrated what it can do by proofs "as strong as words of holy writ," and the people are in need of its benefits. Vaccination in every country where it is enforced has made smallpox, that torment and scourge of the earth, a disease scarcely to be reckoned with. Antidiphtheretic serum has beaten back a pestilence which a few years ago would sweep through village after village and town after town, almost depopulating them of their children.

The work of Drs. Leonard Wood, Walter Reed, Carrol and Lazier, the last two sacrificing their lives in the discovery of the cause and prevention of yellow fever, will ever remain as triumph and a memorial never equaled in the days of romance and knighthood. This discovery alone has resulted in the total eradication of yellow fever from the island of Cuba and our own southern states and the saving of untold thousands of human lives. This discovery, the work of the medical man, has made possible the digging of the Panama Canal.

It would be superfluous to multiply examples, interesting as they are. We are justly proud of our past achievements and the work of the present, but, from the light of our present knowledge, we have only made a good beginning.

In New Zealand, where public health is more carefully conserved through governmental agencies than in any other country, the annual death rate is only 10 per thousand, while in this country, which is just as healthy as New Zealand, the death rate is 17 per thousand. If we in this country do as well, and there is no good reason why we could not, it would amount to a total yearly saving in human life of six hundred and thirty thousand, more than a half million human beings saved to life and usefulness—enough to re-people the state of Maine.

If we as professional men know these things to be true, does it not lay a heavy responsibility upon us? And we should feel the weight of that responsibility? If knowing these facts we do not put forth every effort to correct these wrongs, are we not occupying a false position before the public and cannot the people in a measure hold us responsible for some of the tragic results of neglected sanitation and prophylaxis?

The inveterate enemy of health legislation is the commercial interests. In the onward march of scientific health conservation the ravings of anti-vaccination fanatics count for little in comparison with the opposition which comes when such forces as vested interests and corporate wealth throw their influence against it, because it means in a measure their regulation and control, when their interests run counter to the public health. And right here is the strongest argument in favor of the National Department of Health, with its head a member of the President's cabinet instead of a mere bureau subordinated to the interests of sheep, cattle and pigs.

Illustrative of this is the scandalous way in which the commercial interests of the Pacific Coast triumphed over the interests of public health, when a judge decided "that there is not now and never has been a case of bubonic plague in the city," at the time when the Chinese portion of San Francisco was filthy with it. Through the influence of President McKinley a committee was appointed by the Secretary of the Interior of men of high character and fitness, Drs. Novy, Flexner and Barker, who found plague scattered all through the heart of San Francisco. But then more than a year had passed since the disease first was discovered, and that dreaded of all scourges is now beyond the bounds of the city and is endemic on the Pacific Coast, from the Mexican line to the city of Seattle.

If a national health department could have taken hold of this problem in its incipiency, this condition would probably not exist as a perpetual menace to the people of the Pacific Coast states.

In the accomplishment of this reform the physicians' principal work lies in the way of popular education, but we must not forget the political aspect of the question. Should we as a profession enter politics? No. But as individuals we should make our influence felt in whichever party we cast our lot. Wire-pulling, log-rolling should form no part of a physician's political activities, no matter what the temptation. He must wield an influence based upon dignity and the righteousness of his cause. Yes, the physician should be a politician in the best sense of the term and discharge his civic duties courageously and magnanimously both public and private. Influence gained in any other way is fleeting and "that man's last estate is worse than the first."

When it comes to writing these progressive measures into statutory law the physicians must keep their hands off. It must be trusted to men big in brain and large of heart, incorruptible, in sympathy with the movement and absolutely sound in the law. The forces arrayed against it will be powerful and resourceful. The opposition will come chiefly from certain corporate influences, patent medicine companies and a few misguided religionists. These forces have crystalized their energies in an organization, called the National League of Medical Freedom. When you look beneath that cloak you see the cloven hoof and are led to exclaim, as did Madame Roland when she faced her execution, "Oh Liberty, what crimes are committed in thy name!"

These forces have little to fear from county boards of health, of city boards of health and not much more from state boards of health whose rules and regulations are nullified by conflicting rules, operating in adjoining counties and states. People travel, winds blow, insects fly from one district to another carrying disease, making a problem too big and too vital to be left for each small community with its conflicting rules to settle by itself.

This brings us to the fact that the average physician has not sufficient training to become everything he should be as a public health officer. This work is so comprehensive that to properly discharge these duties requires men trained in public health matters with the view of making that their life work. Public health boards made up of business men, professional politicians and a physician, chosen not because of a special fitness but because he is a good party man, would then not be tolerated. The medical college should offer a special course for the man who wishes to devote himself to public health work.

It is impossible in one paper to begin to cover this field. But if I have stimulated your thoughts along these lines, so that in the future you as professional men and public benefactors will take a more lively interest in a question which is so big with possibilities for good, the purpose of this paper will have been accomplished.

As physicians our duty is plain. We must be the sanitary educators of the public. We must create an irresistable demand for progressive health legislation both state and national, and in years to come, we will have the satisfaction of knowing that thousands of our fellow beings are living and enjoying life—living monuments to the unselfish and patriotic efforts of a conscientious medical profession.

DISCUSSION.

Dr. T. B. Beatty, Salt Lake City: It is a regrettable fact that mankind does not know what has been accomplished by medicine in the reduction of diseases and the death rate. That is due to the fact that records are unavailable except within recent years, and then very imperfect records. It is a reflection upon the intelligence of this country that only in the state of Massachusetts have reliable statistics been kept for a sufficient number of years to be of value. The records show that in the eighteenth century the death rate was between 40 and 50 per thousand, and increased in epidemic times to 80. Today the death rate in the United States is about 16 per thousand. It should be reduced to 8, which seems to me entirely feasible, and should be the immediate goal of the medical profession. Disbrow has said that it is within the power of mankind to rid itself of all parasitic diseases. Physicians know that to be a fact. The trouble is the laity does not and, of course, there is the trouble, as the doctor has said in his paper. It is a matter of educating the public. We are the people to do this. How to bring that about is the problem. Even now I doubt that we will secure the passage of the enactment of the proposed legislation by Congress which is entirely righteous, which has for its purpose such an eminent object. because the fellow who has the almighty dollar tacked up on the wall and is worshipping that, seems to have the key to the public sympathy and the public mind, and creates the impression that the medical profession is a medical trust.

The physician's duty goes further. It cannot entirely be left to the health departments to enforce the law and carry out in the spirit the provisions necessary to prevent the spread of contagion. The physician should make it a part of his duty conscientiously to assist in that matter. There are men in Salt Lake City, as elsewhere, who resent the imposition by the law of the duty of reporting births and deaths. That is in point with my first observation, that it has been a reflection against the intelligence of this country that no general registration of births and deaths has been effected. Without that it has been impossible for sanitary authorities to properly keep track of the sources of disease and to prevent them. I take this opportunity to plead for more care in this particular. It should be a matter of pride to put the state in advance in that particular, and we could soon claim recognition as a registration state, which is very important for our own sake and credit abroad.

Dr. G. W. States, in closing: The only think I wish to bring up and again impress upon you is that the physicians must be the body guards of the public along sanitary lines; that upon them devolves the responsibility of creating a public sentiment and a demand for proper legislation. Our legislators and politicians care very little about the sentiment and the wishes of a body of this kind. They have got to know that thing is backed up by public sentiment which rules, and they have got to know how it is going to affect their votes. When they find that the vote is for it, we will find them very smilingly enthusiastic for reforms, and they will tell the public how they were for it all the time, only they wanted to make a real good bill and see that things were done right. The physicians through their organizations should see that the local sanitary officials are physicians. There are sanitary officials all through the western states who are newspaper reporters, farmers, business men and men of that class. Those men may be honest, sincere and conscientious, but they do not bring to the office that ultrascientific training which comes to the physician.

SOME OBSERVATIONS ON DIRECT BLOOD TRANSFUSION WITH REPORT OF A CASE.*

By Arthur T. R. Cunningham, A. B., M. D.,
SPOKANE, WASH.

No procedure in modern surgery is capable of such immediate and gratifying results as that of direct blood transfusion. The clinical picture of a patient, across whose features the shadow of death is rapidly appearing, being suddenly changed into an animated being, red blood coursing through the previously pulseless vessels, the flush of life suffusing the pale cheek, the awakened interest in surrounding scenes; such a transformation is comparable only with the miraculous biblical accounts of the raising of the dead. It is not to be inferred from this, however, that at last the fountain of perpetual youth has been discovered, or that it is possible, with a wave of a magic wand, to restore sclerotic tissues of old age to the elasticity of youth, nor yet is it proven possible that by direct blood transfusion the course of any disease producing fixed tissue changes can be more than temporarily modified. There are two relatively common conditions, however, namely, shock and grave hemorrhage, where direct blood transfusion may be the only remaining life saving measure and, if properly performed, without too great delay, the results are little short of astounding.

Before proceeding farther in this subject of direct blood transfusion, I desire to pay tribute to that probably more generally applicable measure, the use of the normal saline solution. The use of this solution by hypodermoclysis, proctoclysis and infusion has been employed so universally and so effectively, during the past decade, that it justly occupies a most exalted position in our surgical armamentarium. The use of the physiologic salt solution is so easy, safe, convenient and, under suitable circumstances, efficient, that its use will probably never grow less popular. But there are conditions, however, where the salt solution fails to do more than temporarily increase the blood pressure and, if we would save the life under these conditions, it becomes necessary to resort to the more heroic measure of direct blood transfusion.

There are certain historical references which would indicate that blood transfusion is of ancient origin, but since the discovery of the circulation of the blood by Harvey, transfusion has been practised many times, though but crudely and empirically and, naturally with varying results. There have been many investigators who have contributed valuable knowledge to this subject, but it remained for two men of our day and generation to develop a satisfactory technic and to raise the procedure from empiricism to a practical working measure, with the indications and contraindications fairly well shown.

I refer to Carrel, of the Rockefeller Institute, and to George Crile, of Cleveland, Ohio. The first developed the well known suture method of making end to end anastomoses of blood vessels, and Crile evolved a simple technic with the use of canulae of various sizes, the plan of each being to approximate intima to intima and thus diminish the likelihood of clotting. Other methods have been devised, such as Brewer's tubes, consisting of glass canulae connecting the two vessels, but as this interposes a foreign substance, with which the blood current must come in contact, there is increased likelihood of clotting.

To reduce this tendency of clotting, it has been recommended to coat the glass canulae with paraffin or petrolatum, but even this fails to prevent the clotting and, furthermore, reduces the lumina of the already small tubes. It is generally agreed that the danger of clotting is reduced to a minimum only when intima is joined to intima, either directly by suture or by invaginating the cuffed end of one vessel into the other, as is done by means of the Crile canulae. Working on the Crile principle, several modifications of his canulae have been evolved, one of which, I think, has especial merit. This is described by Dr. Charles Ellsburg, of Mount Sinai Hospital of New York. It is built on the principle of a monkey wrench and can be enlarged or narrowed by means of a small screw at its end.

While all these methods are good, the greater facility and efficiency of one over another depends largely upon the operator's experience with that particular method. Personally, I feel that we approach the ideal by employing the simplest methods and, with a little practice, I believe that the direct suture is as simple as any method yet devised. As in intestinal work, the use of mechanical contrivances as an aid in making anastomoses is being replaced by the direct suture, so, I believe, also in blood vessel anastomoses, the direct suture methods will eventually prevail over the others.

As to the indications for transfusion, I can do no better than to refer to Crile's general recapitulation of transfusion, in which he states that in pernicious anemia, toxemia, certain drug poisonings, leukemia, acute hyperthyroidism, carcinoma and uremia, it has been of no value.

In tuberculosis and chronic infection, it has certain value. Transfusion of blood from an immune animal has cured sarcoma in dogs. In human sarcoma there is some evidence of value, though it is not yet proven. In pathologic hemorrhage it is of marked value. In acute hemorrhage, if done in time, transfusion is specific. In suitable cases it seems to be almost specific in the prevention and treatment of shock.

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*Read before the Eighteenth Annual Meeting of Idaho State Medical Association, Boise, Ida., Oct. 6-7, 1910.

As illustrative of the specific action of transfusion of blood in grave hemorrhage, I wish to report the following case:

The patient was an American woman, thirty years of age, who, up to her present illness, had always been well. Family history was negative. On May 28, 1910, she was admitted to the hospital with the history of having miscarried about a week before. She was still flowing profusely. Temperature 101°, pulse 94. The uterus was cleaned out and a large amount of retained secundines removed. From May 28 until June 6, her temperature varied from 99° to 101° and pulse rate up to 100. On June 5 and 6 she passed a large amount of bloody mucus in her stools. There was considerable tenderness across the lower abdomen and a mass could be outlined back of the uterus extending upwards into right iliac fossa.

On June 6, she was taken to the surgery and an extensive abscess cavity was drained. At least 500 cc. of very foul smelling pus was removed, after which, without any handling of the viscera or any attempt to break up adhesions, she was returned to bed in the Fowler position with a saline proctoclysis, according to the Murphy method. With the exception of a troublesome tympanitis for several days, her progress was all that could be expected. The wound draining freely at first, practically ceased draining in two weeks, although the sinus persisted. Occasionally there appeared bloody mucus in the stools. On June 20, two weeks after her operation, she passed several large clots from the bowels. On the 22nd she again passed a considerable quantity of clotted blood. A blood examination at this time showed hemaglobin 35 per cent. and white cells 11,300. On the 26th of June, she had a hemorrhage from the bowels during the night, after which she was very weak, nauseated and vomited a dark liquid. The following day she vomited several times and refused all nourishment. Even stomach washing did not check the vomiting. The night of the 27th, at about the same hour, she had another hemorrhage from the bowels which exhausted her greatly and left her a weak, thready pulse of 126. At this time transfusion was suggested to her but she refused for sentimental reasons. From June 27 until July 2, she daily passed some blood, though not in such large quantities. Her condition became increasingly alarming with great prostration, numbness in legs, frequent emesis and refussal of all nourishment. In the meantime, we had sent for her brother, a big, husky woodsman, who proved to be an ideal donor.

On July 2, having finally gained consent of the patient at the insistence of her brother, we prepared for the transfusion. Drs. White and Hinman took samples of blood from each and subjected them to tests for hemolysis. We ascertained since, however, that these tests were incomplete, as it takes at least 24 hours to properly test for hemolysis. However, with negative results, after a few hours we were satisfied in our minds and proceeded with the transfusion, which we would probably have done in any event, as the condition did not warrant waiting much longer. At this time the patient's condition was as follows: temperature 99°, pulse 134 per minute, scarcely perceptible at wrists. Her face was thin and wrinkled, ears and nose transparent, lips blanched, attitude listless and apathetic with no interest in surroundings; at times, exceedingly fretful and apprehensive. Her blood examination showed hemoglobin 10 per cent. (Tallqvist), white cells 32,400, reds 1,080,000. The radial artery of the donor was connected with the median basilic vein of the recipient with a paraffin coated Brewer's canula. During the transfusion, Drs. E. White and F. Hinman recorded the following notes:

4:30 P. M. Transfusion started.

Time		Pulse	Blood Pressure
4:33		120	112
4:35		116	
4:40	Disconnected and clot removed from canula and vein		
4:45	Readjusted		110
4:45		112	110
5:00		102	110
5:05		98	109
5:10		100	109
5:15		100	110
5:25		100	110
	Lips very red.		
5:30	Disconnected and clot removed from canula.		
5:40	Readjusted, using a larger canula.		
5:40		98	110
5:45		96	109
6:00		94	110
6:05		94	111

At this time donor began to show signs of faintness and transfusion was stopped, having lasted one hour and twenty minutes. After the transfusion the blood examination of the patient showed an increase in hemoglobin to 35 per cent. as compared with 10 per cent. before the transfusion; red cells, 2,016,000 as compared with 1,080,000; and white cells 23,700 as compared with 32,400.

A most remarkable change had taken place in her physical and mental condition. Her withered tissues had filled out, lips were reddened, and she showed a lively interest in her surroundings. Two hours after her return to bed she called for something to eat. Her improvement from this time was marked and rapid. Her hemorrhages ceased entirely and in a week's time the sinus, which before had shown no tendency to heal, had entirely closed in. On July 9, nine days after the transfusion, a blood examination showed red cells 3,200,000; whites 6,400; hemoglobin 55 per cent., showing a marked regeneration in the red cells, as well as the fixed tissue cells, also a reduction of the leucocytosis. July 13 she was discharged from the hospital, in a very satisfactory condition. Since that time her improvement has been steady, she has gained ten pounds in weight, and there has been no return of the hemorrhages.

THE PRESENT STATUS OF THE TREATMENT OF GOITER.*

By E. M. Rininger, M. D.,

SEATTLE, WASH.

Graves's Disease.

In the hyperthyroidism of Graves' disease, or exophthalmic goiter, there is a glandular proliferation or an increased amount of functionating tissue. The more epithelial cells we have working, the more thyroid we have manufactured and the more severe our symptoms. This gives the widespread belief at present that removing the excess of the functionating gland needed offers the only rational and successful method of treatment and, if relief be not forthcoming, it is because there has not been enough of the gland removed, or that the operation was not done early enough to avoid the various degenerations.

The operation, until recent years, was not popular on account of the large mortality rate, which was due to neglected cases, secondary degeneration, sepsis, shock and hemorrhage, loss of voice by injuring the recurrent laryngeal nerve, and the symptoms not being entirely relieved on account of not removing enough of the diseased gland. But the operative technic outlined so carefully by Mayo and Kocher[1], has simplified and perfected the operation so that now we seldom encounter hemorrhage and shock. Sepsis, as in other general work, is almost a thing of the past. Loss of voice by injury to the recurrent laryngeal nerve is but slightly dangerous with the precaution emphasized and carried out by Mayo[2]; that is, not to remove the base of the capsule which also protects the parathyroid bodies. In extremely severe cases, where thyroidectomy is not deemed wise, the ligation of the superior thyroid arteries and veins on one or both sides gives relief in most cases and can be followed later with removal of the gland should the symptoms recur.

Serum. Many attempts have been made to find a substance which will have a neutralizing effect upon the toxic secretion of the gland. Dr. S. P. Beebe[3] has prepared a serum which he terms an antiserum or cytotoxic serum, that gives excellent results in selected cases of typical exophthalmic goiter in the early stages.

In this connection I wish to mention four cases:

Case 1. Mrs. M. was operated on May, 1894, by Dr. Bernays. (This is claimed to be the first case of exophthalmic goiter operated on in this country.) The whole of the right lobe, isthmus and part of the left lobe was removed. After one year the patient had complete relief from all symptoms until October, 1907, when there was a recurrence of all the symptoms in a very intense form. The remaining gland became more enlarged; the exophthalmos very marked; pulse up to 170; heart dilated; skin flushed; marked tremor; diarrhea; temperature of two or three degrees from time to time; and an acute arthritis.

Following the precautions advised by Dr. Beebe, I commenced the use of the serum. Injected six drops in the deltoid muscle and got an alarming reaction; site of injection became very much swollen, reddened and painful; temperature 104 degrees, pulse 200; all of the symptoms seemed to be greatly exaggerated but in about thirty hours' time subsided very rapidly. On account of having such a severe reaction from the first injection, I made the second five drops but got no reaction whatever; the next day seven drops with only a slight reaction; in two days ten drops with no reaction; in two days ten drops with no reaction. From that time on I gave ten, twelve and fifteen drop injections but got no noticeable reaction outside of a slight local irritation. Patient made a very rapid recovery and has had no return of the symptoms. The remaining gland became much smaller than before this recurrent acute attack.

This case has been observed from time to time and there is absolutely no sign of any return of the trouble. The action being so prompt and decisive in this case reminds one of the antitoxin in diphtheria.

Case 2. Mrs. D. Case of cystic goiter of many years' standing that had occasional attacks of hyperthyroidism. There were no results from using the serum and the case was later operated on with complete recovery.

Case 3. Mr. K. Pure case of exophthalmic goiter of severe type and had been under various medicinal treatments for six or eight months with no result. Saw the case in September, 1909; put him on absolute rest, strict diet and Beebe's serum with moderate doses, working up cautiously. No reaction but the case rapidly improved. Pulse dropping from 120 to 80 and 90, exophthalmos and tremor diminished; continued the weekly injections of serum for several months. Patient continued to improve for about eight weeks and then was at a standstill. In February symptoms all became worse and I removed the right lobe and isthmus. He has rapidly improved and resumed his occupation of carpenter.

Case 4. Mr. S., age 31. True exophthalmic type. Had been suffering over a year and under various treatments with no improvement. Great emaciation, pronounced exophthalmos, very rapid pulse, marked tremor; in fact, all the ordinary symptoms observed in hyperthyroidism were present in an aggravated form. In August, 1909, put the patient on absolute rest, strict diet and the serum, commencing with a small dose and working up gradually, giving it every other day and finally once a week; symptoms improved from the first and have been constant; gained twenty-seven pounds in weight, heart normal, gland much smaller; exophthalmos about gone, reports that he feels perfectly well and has been following his usual work, that of a merchant, for the past four months.

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*Read before King County Medical Society, Seattle, Wash., June 6, 1910.

[1] The Operative Treatment of Hyperthyroidism, Surgery, Gynecology and Obstetrics, June, 1909.

[2] Treatment of the Posterior Capsule of the Gland in Thyroidectomy. Based on 375 Operations for Goiter. Journal Surgery, Gynecology and Obstetrics, July, 1907.

[3] Journal American Medical Association, 1906, XLIV, p. 487.

X-ray. Dr. C. H. Mayo says that much good is accomplished in the use of the X-ray, in that it will lessen the vascularity, induces sclerosis around the gland and many cases show a great improvement as to tumefaction and function. I have used it in many cases but only in connection with other treatment; so it is hard for me to say the amount of benefit actually received from the X-ray and that from medicinal treatment, rest and diet.

I have in mind a Miss F., who was suffering from a pure type of Graves' disease with very marked symptoms. With diet, rest, tonic and the X-ray the patient improved rapidly and in about one year's time all symptoms disappeared and there has been no recurrence. The gland is about normal in size, no exophthalmos, no tremor, heart normal. In fact, there are no symptoms showing any disturbance save for the slight enlargement of the gland. This case has been under observation four years.

Medicinal Treatment. Many drugs have been advised and tried out. Those that seem to have had the best effect are as follows: belladonna, which seems to have some temporary effect on checking the gland secretion; quinin hydrobromate and ergotin, as advised by Forscheimer, seem to have a decided effect in some cases.

While I have used them in several cases, there is one case in particular I wish to mention, that of Mrs. G., who had been a sufferer of Graves' disease for about eighteen months. When I saw her, she had been confined to her bed for a few weeks, greatly emaciated, gland large and pulsating, eyes protruding, skin flushed, pulse very rapid, 160 to 180; heart dilated; very poor food assimilation; insomnia and extremely nervous. Applied ice-bag, alternating between heart and gland; gave a course of calomel and hypodermic of morphia for sleep; five grains of hydrobromate quinin four times a day. In forty-eight hours there was a decided improvement of all the symptoms. In three months' time the gland was about normal, pulse averaging below 100, tremor and exophthalmos about gone and a gain of forty-five pounds in weight over the time she had last weighed, prior to taking to her bed. There was no improvement after the first three months, but I continued the treatment, giving her five grains three times a day in place of four until she left for the East, which was about six months after I first saw her.

Rest. Physical and mental rest should be one of the very important points in the treatment of all cases of exophthalmic goiter and should be enforced early, no matter what other method of treatment is chosen.

Diet. Thompson, in his work on Graves' disease, places great stress on diet, basing his reasoning on the theory that the poison originates from the digestive tract and gives a very interesting report of a large nnmber of cases treated successfully.

Cystic Goiter.

At the present time there is no known medical treatment that will remove or absorb an encapsulated or cystic goiter. In keeping with this statement, I heard Dr. C. H. Mayo state that all round tumors of the thyroid gland have a distinct capsule of their own and never get well unless operated on. If the cyst contents thins, and its capsule undergoes certain changes, there may be absorption of its contents, thereby causing an occasional hyperthyroidism. This condition is very commonly overlooked.

Cystic goiter may cause deformity, severe pressure, neuralgia, hoarseness and difficulty in breathing and from pressure may cause atrophy of the functionating gland substance, thereby causing a hypothyroidism or myxedema. The possibility of malignant degenerations should not be overlooked and we should especially be suspicious of cases developing after thirty-five years of age.

In the non-surgical treatment of these cases some non-irritating absorbable preparation of iodin, used locally, is of considerable benefit, and also the X-ray in some cases, but the result as a rule is not lasting. In the use of iodin, I want to mention that it should not be used in hyperthyroidism, as there is already too much iodin; and rubbing or massaging should also be prohibited.

The danger encountered in the operation for cystic goiter, as the technic is performed today, is a mortality of about one-half of 1 per cent. Kocher reports a thousand cases with three deaths, and demonstrates that the risk is much less than the possibility we have of malignant degeneration. It is well to make the patient appreciate that by operating in this class of cases we not only do not remove the thyroid but we save the good gland in many cases from partial destruction by pressure.

The regular, rounded-out gland of young girls in puberty is a sort of hyperplasia and is different from the round, cystic tumour, and nineteen out of twenty get well without much of any treatment.

In making the decision for or against operation in this type of disease, we should consider medical measures as of only temporary benefit, as against the practical safety and radical relief of surgery.

The operation is not often compulsory, but rather one of expediency and the better way to deal with the patient in most instances is to put the facts plainly before him and let him decide; but should there be degenerations and functional disturbances, pronounced pressure symptoms, the tumour abnormally situated, or should the tumour develop suddenly and grow rapidly with unusual form and consistency, operation should be urged regardless of age.

In conclusion, I wish to recall that no method in the treatment of hyperthyroidism will be of much service without both physical and mental rest. Give all cases of hyperthyroidism a trial of rest, diet, X-ray or Beebe serum and if, after a fair and reasonable time, there is not a steady, progressive improvement, resort to surgery. Don't allow valuable time to be lost for fear of organic degeneration resulting.

SOME COMMON EYE SYMPTOMS AND WHAT THEY INDICATE.*

By Josiah Jones, M. D.
TACOMA, WASH.

In presenting this subject I do not expect to bring forward anything new or original, but will briefly discuss some of the common eye symptoms which are met with very frequently, in which the family physician is usually applied to for advice and treatment. Before I made a special study of the eye, the diagnosis of the eye cases that came to me was not clear. This caused me considerable uneasiness, and sometimes led to my withholding the treatment which should have been immediately given, or to treating them when not sure of the indications.

Judging from my own experience I feel that a part of the members of this society may be interested in a consideration of some of the, perhaps, commonplace but important symptoms which aid us in determining the cause, prognosis, and proper treatment, of these cases. I wish first to consider the injected and inflamed eye ball. Probably a majority of the eye cases applying for advice present this symptom and many of them come to us because they have noticed an undue redness of the eyeball. The trouble may be very simple and transient or it may be of the greatest gravity and importance, endangering the integrity of the eye and requiring prompt and vigorous treatment to save the vision, if, indeed, in some cases that may be done at all.

There are three principal classes of diseases and inflammations that cause this symptom. First, those originating in the conjunctiva either from infection or mechanical injury or irritation; second, those originating in the cornea or iris and ciliary body, and third, glaucoma or increased tension of the globe, the cause of which in primary cases is unknown, but which results in rapid loss of vision if unrelieved, and almost intolerable torture from pain if the disease becomes chronic, often making it necessary to remove the eye. To clearly understand the difference in the appearance of the injection in these three classes of diseases, it is well to remind ourselves of the origin and arrangement of the blood vessels supplying the parts involved. The anterior surface of the eyeball is completely covered by the conjunctiva a mucous membrane, the epithelial layer of the cornea being a continuation in modified form of the conjunctiva. The vascular supply of the conjunctiva is from the anterior and posterior conjunctival vessels. The posterior conjunctival vessels are from the vessels of the fornix or transition fold, and run forward in the substance of the conjunctiva toward the cornea, becoming less numerous as they approach the latter. The anterior conjunctival vessels are branches of the anterior ciliary, these being from the four recti muscles and run forward in the episcleral tissue toward the cornea. Near the margin of the cornea they disappear, penetrating the sclera into the interior of the eye. Before disappearing they give off numerous branches which form vascular loops around the margin of the cornea and serve the important purpose of supplying nourishment to the cornea. The anterior ciliary vessels, before they penetrate the sclera, also give off other branches, the anterior conjunctival which run backward in the conjunctiva, anastomosing with the posterior conjunctival vessels.

Thus we have, supplying the anterior part of the globe, two distinct sets of vessels which in diseased conditions give rise to two distinct forms of injection which point to the origin of the trouble. When the irritation originates in the conjunctiva we have conjunctival injection, characterized by a vivid scarlet or brick red color. The vessels being superficial in the substance of the conjunctiva, the individual vessels are distinctly seen, and by moving the conjunctiva they are seen to move with it. As these vessels, the posterior conjunctival, are less numerous as we approach the cornea, the intensity of the injection diminishes as the margin of the cornea is approached.

Ciliary or circumcorneal injection occurs when the irritation originates in the cornea or iris and ciliary body and is characterized by a rose red or pale violet zone around the margin of the cornea, in which the individual vessels cannot be distinctly seen. In severe inflammations of this character individual meshes of vessels of violet color may be seen further back on the globe. These are not movable with the conjunctiva being the anterior ciliary vessels, situated in the episcleral tissue. The darker color is due to their deeper location.

In severe inflammations first affecting one set of vessels the other always becomes involved through the free anastomosis of the anterior and posterior conjunctival vessels. The origin of the injection can yet usually be made out, the rule being that, if of conjunctival origin the injection is less intense as the cornea is approached and if of corneal or iris and ciliary origin, the intensity of the injection increases as the margin of the cornea is approached. In glaucoma we have a circumcorneal injection distinctly venous in character. The color is dark, and there is a tendency toward edema. Thus we have in this one manifestation of redness and injection of the anterior surface of the globe a symptom which, in many cases, if rightly interpreted, enables us with a glance to know the structures involved in the inflammation, and the general indications for treatment.

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*Read before the Washington State Medical Association, Bellingham, Wash., July 26-28, 1910.

In conjunctival troubles accompanied by conjunctival injection cleanliness is indicated. We use mild antiseptic washes with whatever of astringents, stimulants and sedatives may be required. In disorders of conjunctival origin when not complicated, atropin and other mydriatics are contraindicated as they often aggravate the trouble and at any rate would cause inconvenience by paralyzing the accommodation. Eserin and other myotics are irritant and should not be used. In corneal or iris and ciliary trouble, in which we have circumcorneal injection, atropin or other mydriatic should at once be used and are ideal in the treatment of these conditions. They dilate the pupil and in that way prevent the iris from adhering to the anterior surface of the lens or, if adhesions have already formed, they may be broken up. If this measure be not used in the plastic forms of iritis, extensive adhesions from which may with their secondary effects result in loss of vision and may even lead up to conditions which will make it necessary to remove the eye. Mydriatics also paralyze the sphincter muscle of the iris and the ciliary muscles and put these organs to rest, as effectively as does a splint on a broken limb. The vascular engorgement is also reduced so that the parts are placed in the most favorable condition for resolution.

In glaucoma we have elevation of tension and frequently rapid destruction of the eye. The cause of the disease in primary cases is unknown but the condition is one in which the drainage of the eye is not sufficiently free to maintain the normal tension. The lens is pushed forward, the pupil dilated and a dusky venous injection surrounds the cornea. It has been found that if the pupil can be made to contract by the use of eserin or other myotic, drainage is favored and the tension is decreased so that eserin should be promptly used.

The principal points of differentiation between glaucoma and iritis are as follows: In glaucoma we have a dilated pupil, dark venous circumcorneal injection, clouded anesthetic cornea and elevation of tension. In iritis we have a contracted pupil, rose red or pale violet circumcorneal injection, sensitive cornea and usually no elevation of tension, the elevation of tension when it does occur being secondary, usually the result of adhesions interfering with the drainage of the globe, thus producing secondary glaucoma. The importance of immediately differentiating between iritis and glaucoma cannot be overestimated, as the diseases are frequently rapid in their progress and should receive proper treatment immediately. The most important part of the treatment, that of paralyzing the iris and ciliary muscle in the one and that of stimulating the contractions of the pupil in the other, are directly opposed to one another. If the mistake in diagnosis should be made and the proper treatment for one condition be used in the other much harm would result. The mistake of using atropin in glaucoma has been made many times and has not infrequently resulted in destruction of the eye. There are of course other diagnostic points and other necessary measures of treatment. I have only mentioned these as illustrating the importance of an early and accurate diagnosis in the diseases which present as one of their prominent symptoms the red, injected eyeball.

I wish also to mention some diseases of the conjunctiva and lids which seem to be primarily dependent upon eye strain. A chronic or recurring conjunctivitis or a simple injection of the globe, when not due to a specific infection of some sort or to some irritant which may be discovered, is often due to eye strain and after careful refraction and the use of proper lenses gets well with little or no other treatment. Some marked chronic inflammations, which in several instances have been wrongly diagnosed as trachoma, have promptly recovered after being properly refracted and fitted with lenses. In all chronic cases of this kind, if the cause be not clear, refraction should be considered. There are several lid conditions which are symptomatic of eyestrain, namely: Recurrent hordeolum or styes, multiple chalazion and blepharitis marginalis or inflammation and scaling of the margins of the lids. All these disorders if chronic will usually not get well and stay well without the use of proper lenses and with their use after the trouble has once gotten well it does not occur. The lenses should be carefully fitted. Almost all persons under 30 and many up to 40 should be tested with accommodation paralyzed. It is no proof that proper lenses will not do the work if the refraction test has been superficial. The reason for the causative relation of eye strain to the conditions mentioned, I believe, is not known. Some of them do not exist without infection, possibly none. It is probable that with like exposure and infection an eye not strained because of refractive error either has sufficient resistance not to be affected or promptly recovers, while in those cases where eye strain exists the resistance is decreased so that no other method of treatment will permanently relieve. At any rate, experience has taught us that these conditions if chronic are accompanied by eye strain and that they cannot be permanently relieved until the error of refraction has been corrected.

I have only intended that this paper should be suggestive and not exhaustive and have given some of the symptomatic points that have helped me to determine in a general way what structures are inolved in a given eye case and the indications for treatment.

REPORT OF A CASE OF EPIPHYSITIS.*

By Ray H. Fisher, M. D.,
RIGBY, IDA.

I have chosen to report a case of epiphysitis and to discuss this condition. The case is reported because I believe it is comparatively rare in general practice and because it is a condition which should be kept in mind, especially in children, for failure to diagnose the disease early might cost the patient his life. Also the writer hopes by the discussion which may follow this paper to gain more light on the subject and find wherein he might have erred while in charge of the case.

On the night of April 22 I was called four miles into the country to see a boy who was "very sick." I found the lad with a temperature of 105°, pulse 130, respiration 30,—face flushed, mind at times delirious. The right ankle was swollen, tender to touch and painful. The child had been sick three days, the people supposing the condition to be la grippe, and that with home nursing the boy would be all right. As history, I learned that the boy had complained of slight pain in the foot the morning of the fifth day preceding my call. The family history is unimportant, save that the parents and grandparents are well, of a sturdy type, and have no family history of tuberculosis. The boy's history was good, save for a perforating fracture of the frontal bone just over the right eye some five years before, the lesion requiring about a year to heal, and from which several pieces of dead bone had sloughed out. For years, however, the boy had been perfectly well until his present illness which had come on suddenly.

Finding nothing in the boy's general condition to account in any way for his trouble, I attributed his illness to the inflamed ankle. Not seeing any external abrasian and getting no history of trauma, I diagnosed the case as *probably* one of acute inflammatory rheumatism, or *possibly* infection in the leg near the foot. I told the people that if he was not improved by morning I should open the foot.

I crowded the salicylates and when morning came the patient was worse, having had a chill about eleven a. m. I saw him at 12:00 noon, with temperature 104°, pulse 135, respiration 32. Deciding to incise and drain, accordingly, under ether administered by Dr. J. E. Melton, of Menan, I incised over the lower epiphysis of the tibia just above the ankle joint. About one-half an ounce of pus was evacuated. A copious wet bichloride dressing was applied. The patient was given strychnia gr. 1/60, and whiskey one ounce every four hours. Temperature next morning, 101°, pulse 96, respiration 26, and the boy had rested well during the night. At 10 p. m. the evening following, I was again called and found temperature 103 3-5°, pulse 120, respiration 38. I gave 20 cc. P. D. & Co. polyvalent antistreptococcic serum, because from the chill the patient had had and having found pus, I thought the streptococcus might be concerned as a bacteriologic factor in the etiology. The people were told that on the morrow a more radical operation would be done. Six hours after the serum was given, temperature was 101°, pulse 96, respiration 26.

On April 26, under ether, Dr. Melton and I enlarged my previous opening, getting four to six ounces of pus. We were careful to keep out of the ankle joint. We found some denuded periosteum but the condition of the bone seemed good. The wound was swabbed with iodin followed by alcohol. Two fenestrated rubber drainage tubes were used, passing from two openings anteriorly into one opening posteriorly. One tube ran along the internal surface of the tibia and one between the tibia and fibula. The wound was dressed with a loose covering of sterile gauze.

The boy showed marked improvement following this operation, the temperature dropping to 99°, pulse 84, respiration 20. Improvement continued daily under irrigations through the tubes until the evening of the 27th, when the temperature went to 103° and the patient's condition became generally worse. I examined the wound and removed one of the rubber tubes, thinking perhaps that I had some obstruction to drainage, and irrigated with hot 1-2000 bichloride solution, flushing the wound out thoroughly. Patient passed a fairly good night except that he did not sleep well, though up to this time he had slept first rate. Whiskey being distasteful, elixir lactated pepsin one-half ounce was substituted every two hours. Food was at all times selected with attention to nutrition, assimilation and somewhat to taste. Strychnia was reduced to gr. 1/60 every six hours.

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*Read before the Eighteenth Annual Meeting of Idaho State Medical Association, Boise, Ida., Oct. 6-7, 1910.

On the 29th the boy complained of pain in the right groin and the temperature was 103°. I found an adenitis present and, as I was still in doubt about the bacteriology of the disease, I gave another 20 cc. of serum. I had sent smears to Dr. C. T. Burnett, of the Colorado University bacteriological laboratory at Boulder, but did not get his report until two or three days after this, which showed the staphylococcus as the organism present.

From here there was no especial change in the patient's condition until May 1st, when the temperature began to rise, reaching a maximum of 104° in the evening. I again saw the boy and found a tender, painful swelling over the upper third of the tibia. Next morning, under ether administered by Dr. Melton, I incised down to the bone over this upper swelling, getting some pus, chiefly from two pockets in the cellular tissue. A small fenestrated rubber tube was run from the upper opening along the bone into the lower anterior one, and then a new tube was substituted through the lower opening. Continuous irrigation with hot normal salt solution was instituted. The pain diminished and the child rested and slept until midnight. Next morning temperature was 101°, pulse 116, respiration 23; appetite poor, which up to this time had been good. The pulse was weaker and the patient seemed more exhausted. Next day the child showed some improvement and the temperature remained from 99 2-5° to 101 2-5°, the boy looking brighter and the wound healthier until May 5, when the ankle looked somewhat angrier. Brandy was here substituted and kept up off and on as the alcoholic stimulant throughout the case.

The patient seemed slightly better for the next few days, temperature fluctuating from 98 4-5° to 103°, keeping usually pretty well down. The slight rise in temperature we attrabuted to secretion of pus and absorption between irrigations, so on May 11 we put the leg in a Hodgen's splint with continuous saline irrigation. This was kept up until evening, then discontinued until morning, because the boy said he could not sleep, then again resumed. This treatment was carried out until May 18, when Dr. Melton and I enlarged our lower opening which had somewhat closed, and swabbed the wound out again with iodin and alcohol. We elevated the foot because of a sort of static edema present. The bone had a good ring to it and seemed in good shape except for some denudation of periosteum.

On May 21, morning temperature normal, maximum for the day 101 2-5°; maximum next day 101°. Temperature ran thus until the 26th when there was a slight rise, and frontal headache complained of. Pulse kept about 120, and weaker. May 28 temperature 102°, pulse 134, but general appearance of patient bright, and the wounds in the foot and leg looked better. The position of the foot occasionally changed for comfort and drainage.

June 4, boy's condition somewhat better, and at the request of his parents, he was moved home, a distance of four miles. He stood the trip rather poorly, seeming more exhausted. No improvement for next few days, condition rather worse. Temperature rose a little daily and on the 10th of June reached 102 3-5°, and more pain complained of in the leg and foot. I examined the wound carefully on the 10th, and noted that it was closing and also that the bone seemed to be more involved, having lost its apparently healthy ring.

Hence, on June 10, Dr. Melton and I decided to enlarge the wound opening and curet away any dead bone that might be present. At the upper end of the tibia we found some necrosis and at the lower end, the tibia entirely necrosed. So we hurriedly passed a drainage tube through the bone and decided to amputate the next morning. On June 11, under ether, Dr. Melton and I amputated at the lower third of the thigh. We felt that to attempt to amputate at the knee or below was dangerous, because of the necrosis at the upper end of the tibia. The boy went on the table with a pulse of 146 and very weak, and of course showed considerable shock for several hours after the operation. From then on he made an uneventful recovery and at the present writing is entirely well.

Examination of the leg after removal showed beginning involvment of the ankle joint (tibio-tarsal articulation, which I believe would later have attacked the fibulo-tarsal and fibula); also about four to five inches of necrotic bone at the lower end of the tibia and a necrotic area of about one inch at the upper epiphysis.

The important things about this case to me are:

(1) The necessity of early diagnosis, for I believe that in another twenty-four to forty-eight hours the boy would have died from his toxic condition. Jack Da Costa, in his Modern Surgery, says, "An attack of epiphysitis may be so acute as to cause death from systemic poisoning before a diagnosis is arrived at." Further this surgeon says, "The condition is often mistaken for acute rheumatism (the mistake I made for a few hours) because of joint swelling; occasionally for typhoid because of the fever, and in some cases for erysipelas because of the redness of the skin." To this the American Text Book of Surgery adds acute arthritis, specific fevers, and meningitis. The things to remember by way of diagnosis are, first, that the condition is most prevalent in early childhood before ten years of age; and, second, that it may result from a most trivial injury, and that no external point of entrance for infection need be necessary.

(2) Result of improvement after incision and drainage, which emphasizes the fact that no delay

must be had in instituting surgical treatment in this class of cases.

By way of treatment I wish to say: (1) We did not drain through the bone, as we considered there was no osteomyelitis, as was evidenced by the healthy sound of the bone, and the fact that when the cellular tissue was thoroughly opened, and perfect drainage instituted, and the wound kept well washed out so as to prevent absorption, the patient's condition was invariably better. Further, believing we had no osteomyelitis present, we were afraid of inducing this condition by drilling through the bone.

(2) Amputation was deferred as long as it was because the people said, "Save the leg if you can," and opposed amputation until the last moment. Also because the weight of opinion on the case was against me. On account of the boy's lack of improvement and gradual increasing exhaustion, I had considered amputation for at least three weeks before it was done, but Dr. Melton was conservative and Dr. Wright, the very able surgeon of Pocatello, whom I called in consultation, advised: "Don't amputate until you absolutely have to."

(3) The boy was not removed to a hospital because of personal requests on the part of his people, and because of their financial circumstances.

I should like to ask these questions for discussion, and will appreciate any criticism this body may have to offer:

(1) Should I have erred at all in the diagnosis?

(2) Did we do wrong in not drilling through the bone in our early operations and, had we done so, do you believe it would have saved the patient from amputation?

(3) Did we delay amputation too long, consistent with a favorable outcome to the case?

(4) What is the opinion and experience of the association with regard to the use of antistreptococcic serum?

MOIST DRESSINGS IN SURGERY.*

By J. T. Townley, M. D.

MILWAUKEE, ORE.

Definition.—A moist dressing is composed of plain sterile gauze wrung out of hot sterile water, and covered with rubber, oil silk or guttapercha. By adding various antiseptics to the water we get borated gauze, bichlorid, iodoform, etc.

Physiologic Actions (1) Drainage. (2) Relief of pain. (3) A vehicle of medication.

(1) Drainage is the most important action of moist gauze, and is due to the capillary attraction of a porous sponge for liquids. Anyone can demonstrate that a moist sponge will more readily pick up a given quantity of water than will a dry one. The maceration of tissue, the continual flow of serum, and the absence of evaporation prevent the agglutination of the wound edges and the formation of a scab.

(2) Since the dawn of medical history the main reliance of man as he walked the floor with an abscess has been the hot poultice. Modern surgery has discarded the poultice as a whole, along with many so-called shotgun formulae of an unscientific age, but we retain separately its more definite and cleanly virtues and apply them as needed. The heat is more easily applied with a hot water bottle or dry air apparatus. The soothing qualities appear in the form of moist dressings which may be termed a surgical poultice. It is strictly scientific and often necessary to insert a drain to the bottom of a wound, but we must remember, however, that each drain inserted in a wound is a thorn in the flesh of the patient. A moist dressing which is not only painless but soothing will in most cases answer the same purpose, furnish a vehicle for medication and please the patient and we all certainly want our patients pleased with our work. A pleased patient makes a fat bank account.

(3) When all the germs of infection cannot be located and removed, we should attempt to neutralize their action or destroy them in situ. To do this requires a germicide that will penetrate without destroying the tissue. Very few antiseptics will meet both these requirements. I have found but two or three that will give results worth mentioning. They are alcohol and solutions in alcohol, mercuric chlorid, and possibly lysol. My experience with such alcoholic solutions as turpentine, tr. green soap, tr. echinacea, tr. iodin, tr. benzoin, etc., each valuable at times, convinces me that it is not the rosin, the echinecea, nor the iodin, but mainly the alcohol which gives the germicidal effect. Alcohol and mercury when confined will penetrate tissues to any desired depth. Of course in healthy flesh these are quickly taken up by the lymph and blood streams and thrown into the general circulation, and but little local effect is produced. But in extensive inflammatory processes the avenues of absorption into the general system are already cut off more or less completely by the induration, swelling, local stasis, and the general walling off of the infected area, and the diseased part may be fairly saturated with these antiseptic solutions without giving systemic symptoms. Artificial hyperemia is useful here. Bichlorid may be applied in strength of 1-6000 up to 1-3000 Stronger than this is injurious to the tissues if pro-

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*Read before Portland City and County Medical Society, Portland, Ore., Nov. 16, 1910.

longed application be made. In all cases where it is used in moist dressings, symptoms of intoxications, weakness and general depression in spirits should be watched for. Alcohol seems to be the antidote and, if applied at the same time, seems to prevent the symptoms.

Therapeutics.—Simple penetrating wounds or extensive deep lacerations, operative or emergency wounds in proximity to an infected area, all cases where the asepsis of the wound closed is questionable, should be dressed with moist borated dressings for 24 to 48 hours. A flow of serum follows which cleans the particles that may have been overlooked. No pus infection will result and the wound will heal kindly as soon as the dry dressing is applied.

Subperiosteal abscess may sometimes be prevented by dressing a deep bruise with a penetrating solution of lysol, green soap and alcohol combined.

Pyogenic Infection.—When virulent pyogenic germs are introduced into living tissue their tendency is to spread in all directions. The tendency of the infected tisue, if resistant at all, is to localize the invasion. The contest which follows is called inflammation. By means of hyperemia and proliferation of connective tissue cells, a limiting wall of swollen tissue is thrown about the infected area. If the blood supply be completely cut off an area of degeneration and necrosis results which, with the broken-down leukocytes and germs, constitutes pus.

The lining tissue in immediate contact with this foreign matter forms a pyogenic membrane and by secretion of serum and the emigration of white cells great pressure is produced in all directions, pressure necrosis takes place in the weakest part of the wall and the pus burrows in the line of least resistance. The more dense the tissue the more pressure required and the more destructive the process. Bone, fascia, muscle, tendon, all are involved and destroyed if they lie in the field of a pyogenic process.

By early and free incision into such an abscess we give the pus an outlet to the surface, the continued flow of serum washes out the detritus, granulations from the bottom fill the cavity and nature with the aid of the judicious incision has completed a cure. It is important that the surface be the last place to heal, and drainage is required only to prevent too quick healing of the surface wound. After free incision a moist borated dressing will keep the skin wound open and free from pain.

Phlegmonous Inflammation.—When infected tissues do not quickly react or the germs penetrate the lymph stream or tendon sheath, a wider distribution of infection and deep phlegmonous inflammation results, with scattered foci, polluted lymph channels with enlarged lymph glands and extensive swelling with more or less systemic infection or septicemia. The original site of infection and all foci along the line of invasion should be opened freely, the limb as far as the swelling extends should be wrapped in gauze, wrung out of hot 1-5000 solution of bichlorid with a 5 to 10 per cent. of alcohol added. Use plenty of solution. Wet dressing is a better name for it. I often apply dressing dry, then immerse the whole limb in the hot solution. Dressings should be changed once a day or oftener, if discharge be abundant. Any localized abscess or very tender point should be opened from time to time, and as the swelling subsides the strength of the solution should be decreased, and a boric acid or normal saline solution finally applied to the damaged tissues. Heat, 120 degrees, should be applied one-half hour, at intervals, to the parts. Have patient remove the oil silk and boil the limb in hot water. Tincture echinacea in about 5 to 10 per cent. solution in hot water I find an excellent application in a prolonged suppuration, where some tendon sheath or fascia becomes infected and requires a long tedious treatment; also cases, of frequent occurrence, where the patient will not allow sufficient incision to be made and a consequent long treatment is required.

Furunculosis can be cured by incision of each boil and a wide area covered by a mild bichlorid dressing.

Contraindications.—These are important. There is no place in major surgery for moist dressings. Thoracic, abdominal and pelvic abscesses are best drained by rubber tube or gutta percha. Also abscesses below dense aponeurotic tissue.

Aseptic wounds should always be kept dry. Gangrene and gangrenous tissues should be kept as dry as possible. Broad, shallow wounds, as abrasions and burns, not requiring skin grafting, should be kept dry to encourage the hermetically sealed effect of the scab. Picric acid is the thing. Cold abscess, tubercular glands and all noninflammatory abscesses do not require drainage.

AMEBIC DYSENTERY CONTRACTED IN THE ARCTICS OF ALASKA.

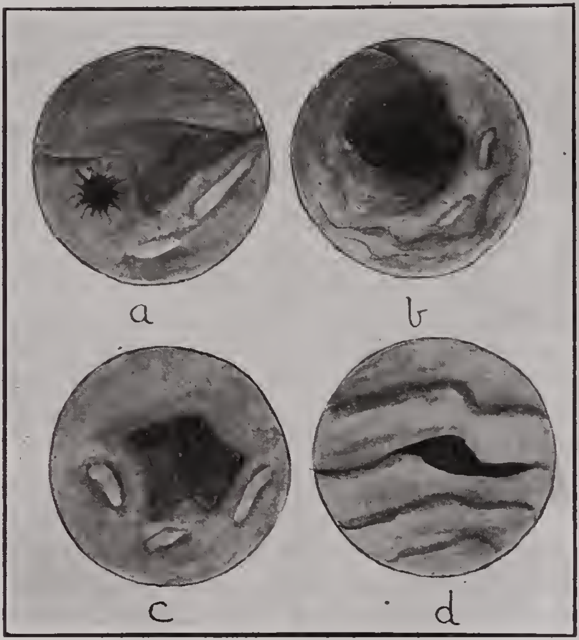
REPORT OF A CASE.

By W. H. Axtell, M. D.,
BELLINGHAM, WASH.

I report the following case because the disease was contracted in the arctics of Alaska, whereas the old belief was, that amebic dysentery is a disease of warm countries only. The patient has been under constant observation for three months, and I believe his statements are true. He claims he was never in the South or any tropical country.

Thomas C., age 42, Scotch, laborer, family history negative. Always was well until in the spring of 1908. Denies any specific trouble.

General History.—In the spring of 1908, while mate on a government boat on the Tanana and Yukon rivers, Alaska, he was taken suddenly ill with cramps and diarrhea. He attributed his trouble to the drinking water. Every winter the rivers overflow the land, thus making swamps. In the spring, on the breaking up of the ice, they use this water. His partner was also taken ill about the same time.



AMEBIC ULCERATIONS.

Various points seen through proctoscope (author's case). (a) Below first Houston valve, (b) Ulceration of first Houston valve, (c) Light lateral wall above first Houston valve, (d) Anterior wall recto-sigmoidal juncture.

The first three or four months the stools were painful, small and irritating, consisting of mucus and blood, and very offensive in odor. Would have twelve to fourteen per day and six or seven at night; became much emaciated, abdomen distended with gas; was for four or five weeks under the care of the army surgeon at Fort Edgerton, who put him on cold water enemas and bismuth. There was slight improvement. Since the fall of 1908 he has had from ten to thirty mucous, bloody and painful daily stools. He received treatment at various points from California to Northern Alaska.

Present Condition.—March 22, 1910. Abdomen tympanitic and tender, temperature normal, pulse normal, skin of face dry and scaly, the desquamation similar to that of scarlet fever. Stools twenty to thirty daily, always painful; very offensive, consist of mucus, blood and granular detritus.

Examination with the Sigmoidoscope.—Within the first eight inches of the lower bowel thirty-six ulcers of various sizes and stages of development were encountered. Some were excavating and covered by white film; others were red, congested points with radiating capillaries, and later developed ulcers. Each Houston valve was covered with three or four excavating ulcers and red congested points.

The accompanying drawings were made as seen progressively through the sigmoidoscope. The bowel was very much thickened and the caliber reduced in size because of the constant tenesmus and straining and the irritation of the ulcers. The amebi coli were in abundance, not only in the mucous stools but in the swabs from the ulcers. The ulcers at the recto-sigmoidal juncture were the excavating and undermining type.

Using the method of Tuttle, of local application of iodin to the ulcers and enemas of ichthyol in various solutions, the daily stools during the first eight days were reduced from thirty-three to three, intermixed only slightly with blood. The first thirty days under this treatment he gained in weight about thirty pounds, and all the desquamation of the skin ceased, appetite improved and he has now two apparently normal daily stools. He has now been at hard labor for about thirty days, and has no evidence of ulcers or remains of the trouble, although there has not sufficient time elapsed to say that a cure is effected.

The important point I wish to make in the report of this case is that the disease was contracted in the arctics of Alaska and from swamp water used for drinking purposes. The patient claims that he knew personally of thirteen or fourteen of his acquaintances who were similarly afflicted.

NORTHWEST MEDICINE
The Journal of the State Medical Associations of Oregon Washington, Idaho and Utah
Devoted to the Interests of the Medical Profession of the Pacific Northwest.
Editorial Office, 719-22 Cobb Building, Seattle, Wash.
FEBRUARY, 1911.

EDITORIAL

THE HOSPITAL ASSOCIATION.

The various lodge and contract work, as it is found in every city, is sufficiently degrading to the medical profession, but the hospital association, which has tried to gain entrance and acquire respectability is a monster of even more hideous mien. True, it pays a little better but it is, itself, nothing more or less than an incorporated quack and the man who stultifies himself by contracting to do its work is himself practising on exactly the same lines that are followed by the quack doctor who has a full page advertisement with a photograph in our daily papers. While he has covered his conscience with the thin veil of the hospital association, this is so transparent as not to obstruct the vision of the upright, regular physician who places the ethics of his profession above selfish money-making schemes.

If Dr. John Smith should place an advertisement in the paper or get out a little circular pamphlet stating the advantages of patients coming to him in groups, paying so much a month, and detailing fully the careful attention received, also stating that he could furnish consultations with the best medical men of the city whenever he wanted it, this doctor would immediately be placed on the list of non-affiliating physicians and his membership in the county society would not be tolerated for a day. However, if Dr. John Smith, Inc., or Dr. John Smith Hospital Association should send out these circulars and should hire Dr. John Smith to do the work at three or four hundred dollars a month, he would, according to the views of some practitioners, be thoroughly regular, honest and upright. As a matter of fact, he is not only a quack but a cowardly one. Thus it is with these various hospital associations, and the men they employ on salaries to do their work belong exactly in the same class as the Dr. John Smith noted above. The doctor will say, however, that he is paid fully as much as he collects from the average patient. As a matter of fact, an investigation would show that any quack who advertises makes more money than the legitimate practitioner who practises medicine according to ethical standards. In this connection it is refreshing to note the attitude recently assumed by the Board of Trustees, of the King County Medical Society of Washington, in barring from its membership anyone who is in connection with these associations, and even more encouraging is the stand recently by the physicians of Whatcom County, Washington, when they individually and as a body refused to render any assistance to the hospital association. These men deserve the highest commendation from the profession of the state and there is no doubt that the Bellingham physicians will in due time reap their reward.

The argument evidently used by the physician who does the work of this hospital association is about as follows: "I cannot make as much money in my practice as I would like and I cannot advertise because I would be considered unethical. I will, therefore, ask the hospital association to do my advertising for me and they can abstract so much more money from the patient than the average physician that they can pay me more than my regular fees and still leave even a larger balance for the officers of said association." Is this honest? Will any reputable, self-respecting physician accept or continue in one of these positions after seeing the direction in which such practice leads? Let every county society in the Northwestern states take a strong stand against these disreputable institutions and the practice that is done by them will be placed in the category where it belongs with other advertising quacks. P. W. W.

SUPERFLUOUS SURGERY.

Is the medical profession becoming daft on the subject of surgical operations? This query is inspired by cases brought to one's attention from time to time, where an operation is urged upon the patient as the only remedy for an existing condition, in which subsequent examination by other physicians can discover no sufficient grounds for surgical procedure; and by the belief which seems to prevail in some sections that the surgeon's diagnostic acumen is determined alone by the revelations of the knife. Sensational articles recently presented in popular magazines, evidently intended to cast reflection on the integrity of the medical profession as a body, and particularly on the work of the surgeon, ought to impress every conscientious physician with the injury to the profession that may result from careless surgery. The surgeon who performs a serious operation on a hasty diagnosis made at first sight, without the employment of modern aids to accuracy of diagnosis, is a menace, not alone to the patient under his care, but to the reputation of all other surgeons of his neighborhood. While it is recognized that two surgeons may form diametrically opposed conclusions as to the necessity of operating on a given case, if one be known as a careful, scientific diagnostician, while the other has a reputation of indiscriminate surgery, the former will readily secure the confidence of his professional brethren which will soon be communicated to the general public, while the latter will be deservedly shunned as a dangerous surgeon to deal with.

One would hesitate to ascribe to any physician the inhuman and mercenary spirit which would permit his advice as to the necessity of an operation to be determined by the prospect of a fat fee. Yet instances come to the observer's notice at times, where the conclusion is forced upon him that such an influence has been a controlling factor in warping the judgment of the operator. What must be the state of mind of the surgeon, however blunted his sensibilities, if a fatality follow such an operation! The surgeon who boasts of a long string of appendectomies, nephrotomies and gastroenterostomies may prove thereby that he is a great and skillful operator, but the thoughtful critic may feel impelled to inquire as to his known diagnostic ability, to determine whether or not a degree of superfluous surgery should be laid at his door. Surgery has of late years attained such a measure of technical perfection that the surgical enthusiast apparently thinks operations are free from danger and he can best clear the obscurity of a given case by some form of operation, whether really demanded or not. Those having at heart the future of legitimate and honorable surgery should take pains to exposo this form of practice and condemn it whenever recognized.

C. A. S.

MEDICAL AND HEALTH BILLS NOW BEFORE THE LEGISLATURE OF OREGON.

There are now three bills before the Legislature of Oregon pertaining to medical and health affairs,—one relating to the practice of medicine and two governing matters of public health.

The first defines the powers of the State Board of Medical Examiners. Its principal features, in addition to the powers hitherto possessed by the board, are: An increase of the examination fee from ten to twenty-five dollars; empowerment of the board to use the funds derived from the examination fees in the prosecution of unlicensed practitioners and practitioners guilty of unprofessional conduct; authorization of the board to subpoena witnesses; a provision for reciprocity with states recognizing licenses issued by the Oregon Board; definition of the practice of medicine; and a provision for recognition of the so-called practice of "naturopathy" and examination of people engaged therein.

This bill is necessarily a compromise. Probably the only one of these provisions, the wisdom of which is questionable is the last named. However, it is hoped that the effect of this provision will be to compel practitioners of "naturopathy" in the future to pass an examination before the State Board. A far simpler solution of the problem that is presented by "osteopathy," "cheiropractic," "naturopathy" and all other so-called "systems," of which there is no limit, would be to compel every person practising the healing art by any system to pass an examination in the fundamental subjects about which there can practically be no controversy among scientific men; viz., anatomy, physiology, histology, chemistry, pathology, and obstetrics in so far as its mechanics are concerned. This would at once erase from the statute books the high-sounding, but meaningless, terms which now gain a semblance of dignity by being recognized in the statute. Anyone having passed an examination in the above-named subjects could then practise by any system he might choose.

The second bill provides for an increase from $5,000 to $15,000 in the annual appropriation to cover the expenses of the State Board of Health along the lines hitherto followed. The appropriation of five thousand dollars has been absolutely inadequate with which to conduct the work of the board without great personal sacrifice on the part of the members, and compelling the board to secure the services of men to perform work requiring scientific knowledge and skill of the highest degree at a recompense shamefully small. It is unreasonable and unbusiness-like to expect the board to safeguard the health of the state with funds barely sufficient to remunerate a competent health officer, to say nothing of the necessary assistants and numerous other expenses. Perusal of the Fourth Biennial Report of the State Board of Health, which is probably in the hands of every physician in the state, will show the vast amount of work that has been accomplished by the board with the inadequate means at its disposal.

The third bill proposes to abolish the office of State Dairy and Food commissioner and to place in the hands of the State Board of Health the powers hitherto held by that office. This provision would be economical as it would require only one salaried officer to perform the work now requiring two and would obviate the duplication of offices, laboratories and skilled laboratory workers. Its greatest benefit to the state, however, would be shown in increased efficiency. The pure milk problem and pure food problem are so intimately associated with the problem of the public health that it is impossible to segregate them. Co-operation between the officers of State Dairy and Food commissioner and the State Board of Health is impossible under the present system. Friction between these officers has produced much discord and public controversy during the last two years, has cost the state thousands of dollars and has resulted in inefficiency in relation to the control of bovine tuberculosis that has undoubtedly sacrificed lives.

The passage of these last two bills would place under one board all matters pertaining to the public health. Such a move is in accordance with common sense and good business policy. As the annual appropriation for maintenance of the office of State Dairy and Food commissioner has been $10,200, the passage of these last two bills would place at the disposal of the State Board of Health $25,200 annually to cover the entire expenses of matters pertaining to the public health.

The State Board of Health and the State Board of Medical Examiners are composed of physicians, public spirited, of large experience and of the highest honor, serving without pecuniary compensation. Sufficient means and adequate authority should be granted them to enable them to properly conduct the affairs entrusted to them. Medical men of the state would do well to study the provisions of these bills and urge their passage. A. W. B.

CONTEMPLATED MEDICAL LEGISLATION IN WASHINGTON.

The perennial agitation concerning the Medical Practice Act, which has for years been a feature of the Washington legislature, appears to be dormant at this session. When the provisions of the act which was passed two years ago were being carried out and, in accordance with the orders of the courts, a large group of irregular practitioners were granted license to practice, various and extensive opposition arose against the new act and many threats were made that at this time the law would be wiped off the statute books. During the past year, however, when it has been demonstrated that the law is just and gives equable consideration to all forms of healers of the sick, this opposition has disappeared, and by common consent the new law will probably receive a thorough trial before any attempts are made to alter it.

The subject of tuberculosis legislation is again before the legislature. A bill for the construction of a state sanatorium has been presented, as well as another for an appropriation to aid in the construction of a private institution. In view, however, of the report of the State Board of Health, to which was referred a bill presented two years ago for the construction of a state sanatorium, it is probable that no appropriation will be made at this session. This report goes extensively into the general features of state legislation for tuberculosis and demonstrates clearly that Washington is totally unprepared for any intelligent legislation on the subject, in the absence of facts and data concerning the disease in this state. The report recommends the appointment of a commission, to make a thorough examination of the whole subject during the next two years, and at the next session to present recommendations looking to future legislation.

The profession should seriously consider the proposed amendment to the criminal code, which permits a woman to testify in criminal abortion cases without incriminating herself. According to this, it would be possible for a woman to ue used for state's evidence in order to obtain a conviction, and to be pardoned on account of her testimony. While this measure may further the ends of justice, it might open up a field of blackmail, which would present untold trouble to the medical profession.

The Employers Liability Act, which has been the subject of so much discussion in commercial bodies, and which seems to meet with pretty general disfavor, contains a clause giving the commission the right to determine the hospital and physicians which shall render emergency service to the injured. This appears to be for the benefit of corporations which employ their own surgeons and hospitals. It seems questionable whether this would be advisable for the interest of the profession at large, and is well worthy of careful consideration before being adopted.

The State Board of Health is fathering a measure looking to the supervision and preservation of water supplies for the cities of the state. If this board has the power to determine sources of water supplies and preserve them from pollution, it will be a great advantage to municipalities and the health of the people, who may thereby be saved great expense and loss of life in attempting to remedy polluted sources of water supplies after they have been established and are in use. There seems to be no reason why such a measure should not readily be passed by the legislature.

Another measure introduced by the board has for its object placing more thoroughly under its control the health officers of the state so that, instead of being subjected to the political whims and changes of boards of county commissioners, they will be determined and controlled by the State Board of Health. The conference of health officers, recently held in Seattle, was considered so successful and beneficial that it is proposed by legislative action to make this a permanent institution. While the different health officers will not be required to attend, it is proposed to require the boards of county commissioners to pay their expenses to such meetings, which will be equivalent to having a pretty full attendance, whenever they meet. The benefit which will accrue to the general health of the state and counties of such meetings is so self-evident that there seems no reason why such a measure should not be adopted.

C. A. S.

CANADIAN MEDICAL ASSOCIATION JOURNAL.

The Canadian Medical Association has established an official journal, *The Canadian Medical Association Journal,* the first issue of which appeared last month. As stated in its leading editorial, "this journal is issued as a medium of expression for all that is best in connection with Canadian medicine." "It will aim to offer adequate means of publication, within the country, of material, some of which, at least, has hitherto been brought to the notice of the profession in English and foreign journals." This publication absorbs the *Montreal Medical Journal,* one of the old established medical publications of Canada. Another well-known journal, the *Maritime Medical News,* in deference to the birth of this larger journal, has gone out of existence with its December issue, feeling that this new journal will replace it in a larger, more satisfactory manner. We welcome this new official journal to the field of medical journalism and recommend it to all who are interested in the best publications of our Canadian brethren.

C. A. S.

THE ASSOCIATE EDITOR FOR WASHINGTON.

Owing to the resignation of Dr. E. R. Kelley, of Seattle, as one of our associate editors for Washington, the trustees of that state have chosen Dr. Herbert E. Coe, of Seattle, to fill that position.

MEDICAL NOTES

OREGON.

Scarlet Fever in School. It is reported that St. Marysville Academy, at Albany, has an epidemic of scarlet fever, where eight or nine cases exist, which has caused the school to be quarantined.

Dr. S. L. Perkins, of Bandon, has returned from a two months' trip East, when he visited many different parts of the country.

Dr. O. E. Granger, of Albany, has recently been subjected to an operation for appendicitis.

Dr. J. B. Dinsmore, of Bridal Veil, was married last month to Dorothy E. Stoppelmann, of South Bend, Washington.

Dr. W. O. Spencer, of Harrington, has gone East to spend the year in post-graduate work in New York and Philadelphia.

WASHINGTON.

The Semi-Annual State Medical Examination.—The winter session of the examining board was held in Spokane, January 4-7. Seventy-five contestants appeared, of whom 51 were successful in obtaining a license. The average age of the class was nearly 36 years, which is much higher than the classes of former years. There were four women among the applicants, two of whom were successful. Only one osteopath appeared, who obtained a license to practise osteopathy. Of the 24 unsuccessful candidates, 8 were repeaters, who had made one or more unsuccessful previous attempts to pass the board. The list of successful applicants, with their addresses, is as follows:

Abbott, W. B., Sunnyside.
Anderson, Kathleen, Tacoma.
Bammert, J. M., Seattle.
Bowlby, T. E., Bay City, Mich.
Brown, W. A., Seattle.
Brown, W. M., Spokane.
Beuffleur, A. K., Seattle.
Bennett, M. W., Spokane.
Bennett, Mrs. M. E., Spokane.
Condon, E. P., Spokane.
Conway, Charles, Cashmere.
Coulter, H. W., Mountain Lake, Minn.
Current, E. H., Mobridge, S. D.
Dahleen, H. E., Couer d'Alene, Idaho.
Eppley, Frederick, St. Joe.
Frost, H. E., Seattle.
Gaul, A. C., Chicago, Ill.
Goodnow, L. L., Aberdeen.
Gorham, F. C., Seattle.
Grosver, G. E., Bay City Mich.
Henderson, J. M., Seattle.
Hyde, F. T., Seattle.
Lamson, O. F., Seattle.
La Moure, H. A., Pasco.
Lea, J. M., Seattle.
Locke, J. Allen, Seattle.
Lundy, L. F., Seattle.
McCarthy, E. D., Priest River, Idaho.
Moore, J. H., Seattle.
Moss, B. J., Seattle.
Moser, E. P., Tacoma.
Munson, L. M., Spokane.
Newton, L. A., Seattle.
Nicholson, E., Brainerd, Minn.
Nicola, B. E., Michigan.
Owens, M. E. B., Spokane.
Parker, F. C., Seattle.
Pratt, Wallace, Othello.
Reitz, J., Tacoma.
Robinson, H. H., Walla Walla.
Rowe, L. B., Bellingham.
Shattuck, E. C., Seattle.
Slaughter, J. T., North Yakima.
Spledel, W. C., Seattle.
Stone, D. D., Tacoma.
Torland, T., Seattle.
Thyng, D. T., Seattle.
Treat, A. M., Seattle.
Williams, William, Malden.
Witherspoon, T. C., Butte, Mont.
Young, C. O., Chicago, Ill.

No Hospital Association in Whatcom County.—The Whatcom County Medical Society has distinguished itself by taking a firm stand on the subject of hospital associations, as indicated in the following announcement:

To the Mills of Whatcom County.

The attention of the Whatcom County Medical Association has been called to certain alleged statements made by the American Hospital Association to the effect that any person insured by them would receive medical and surgical services from any of the physicians of Whatcom County. We wish to correct the impression that this alleged statement might produce, and state, that medical and surgical services of the members of the Whatcom County Medical Association, comprising the licensed practioners in the county, are not at the call of the American Hospital Association. The American Hospital Association, in making their contract, are alleged to have promised the insured any physician whom the patient preferred but have since refused this service. The Whatcom County Medical Association, comprising the regularly licensed physicians of Whatcom County do as a body and individually refuse to render any service for the American Hospital Association.

W. R. Gray, William C. Keyes, U. G. Brier, F. J. Van Kirk, A. Macrae Smith, H. J. Birney, H. A. Compton, S. R.

Boynton, Fred V. Shute, M. T. Dalton, E. C. Ruge, E. D. Hatch, W. D. Kirkpatrick, L. R. Markley, J. Reid Morrison. Carl M. Erb, M. Mehlig, D. E. Biggs, N. W. Wear, O. E. Beebe, S. N. Kelly, W. H. Axtell, George E. Rehberger, C. S. Hood, F. A. Wheaton, W. W. Ballaine, George F. Cook, S. H. Johnson, J. W. Goodheart, I. W. Powell, E. S. Clark, R. R. Pinckard, G. R. Bice.

A Pathologic Museum. The King County Medical Society, in Seattle, is to have a pathologic museum, located in a room of the Cobb Building, which is presented to the Society for that purpose by the Metropolitan Building Company, owners of the building. Dr. Herbert E. Coe is curator of the museum and is prepared to receive specimens which will be properly cared for by the Society.

Visitors to Idaho Meeting. Dr. Frank Herman, C. F. Eikenburg, J. A. Neff and Carroll Smith, of Spokane, presented papers at the meeting of the North Idaho District Medical Society, at Lewiston, Idaho, January 9.

Annual Meeting of Library Association. The annual meeting of the Washington Medical Library Association was held in Seattle last month when the following trustees were elected for the ensuing year: Drs. S. J. Holmes, H. M. Read, C. A. Smith, A. T. Heaveurich and John Hunt. S. J. Holmes was chosen president and John Hunt secretary.

Physician as Civil Service Commissioner. Dr. F. J. Van Kirk, of Bellingham, has been appointed Civil Service Commissioner by the mayor of that city, and the appointment was unanimously confirmed by the city council.

Hospital at the State University. A hospital is to be established at the University of Washington, in Seattle, which will occupy what was known as the Baptist building during the A.-Y.-P. Exposition. This hospital will become what is termed the students' infirmary among colleges, and will be in charge of Dr. D. C. Hall, physical director.

Annual Banquet of Pierce County Medical Society. The annual banquet of the Pierce County Society was held January 17, with Dr. C. Quevli as toastmaster. Toasts were responded to, among others, by Dr. James B. Eagleson, of Seattle; William House, of Portland; E. A. Rich, of Tacoma, and Attorney George T. Reid, of Tacoma.

Annual Banquet of King County Medical Society. This banquet was held at the Washington Hotel, Seattle, January 7, with attendance of about 80. P. W. Willis, retiring president, acted as toastmaster. Speakers of the evening were: Drs. A. C. Smith and Harry Lane, of Portland; Wilson Johnston, of Spokane; J. H. Lyons, G. B. McCulloch, Judge J. G. Ronald and Rev. Major, of Seattle. The affair was a pronounced success.

Typhoid Fever at Oakville. It is reported that an epidemic of typhoid fever is prevailing at Oakville and surrounding territory, which has resulted in a number of cases with some deaths.

Health Officer at Raymond. Dr. R. E. Perry has been elected Health Officer at Raymond by the city council. In the past this work has been done by a non-medical man, but the State Board of Health has insisted that the position be filled by a physician.

Officers of the State Board of Health. At a meeting of the State Board of Health in Spokane, January 12, Dr. E. L. Kimball, of Spokane, was elected president and Dr. E. E. Heg, of Seattle, was re-elected secretary.

Health Officer at Port Orchard. Dr. W. Kenyon, of Port Orchard, was appointed Health Officer of that city by the mayor, the appointment being promptly confirmed by the city council.

A Medical Mayor. Dr. J. A. Dix, a pioneer physician of Garfield, has been appointed mayor, to fill the unexpired term of the present incumbent, who has recently resigned.

Marriage of a Physician. Dr. A. M. Pope, of Okanogan, was married last month to Miss Elizabeth Amos, daughter of Dr. James V. Amos, one of the well-known physicians of that part of the state.

Dr. and Mrs. R. J. Cassell, of Mt. Vernon, have returned from a prolonged visit in Southern California.

Dr. C. B. Wood, of Seattle, has been sick for several weeks, as the result of a very severe attack of appendicitis, for which he was operated on last month. His condition is improving.

Dr. W. A. Brown, formerly of Treadwell, Alaska, has located in Seattle.

IDAHO.

A New Superintendent for the Insane Asylum. Dr. Francis H. Poole, of Pocatello, has been appointed by the Governor as superintendent for the Asylum for the Insane at Blackfoot, in place of Dr. C. A. Hoover, the present superintendent.

Midwinter Session of the South Idaho District Medical Society. This meeting was held at Nampa, January 25. The society includes physicians from Ada, Blaine, Boise, Cauyon, Ellmore, Cassia, Lincoln and Washington Counties. A large attendance was present and papers were read on many interesting subjects.

REPORTS OF SOCIETY MEETINGS

OREGON.

PORTLAND CITY AND COUNTY MEDICAL SOCIETY.

Pres., A. E. Rocky, M. D.; Secty., G. S. Whiteside, M. D.

The Portland City and County Medical Society met in their rooms in the Medical Building, at 8:30 p. m., Wednesday, December 7, 1910, with the President, Dr. A. E. Rockey, in the chair.

Members present: Drs. Bettman, Buck, Bristow, Binswanger, Baird, Coffey, Courtney, Equi, Ellis, Ettelson, Charles Flagg, Julia Flagg, Geary, Holden, House, Irvine, Johnson, Josephi, Gellert, Koehler, Marsh, Mackenzie, Katherine Manion, F. S. Manion, McArthur, Moore, E. B. McDaniel, R. C. McDaniel, McCusker, McLachlan, A. E. Mackay, Nichols, O'Day, Pease, Parrish, Sommer, Sternberg, A. W. Smith, Roth, A. C. Smith, Stedman, Sabin, Pettit, Tilzer, Taylor, Rockey, Wight, Williamson, Wolf, Whiteside, Walker. Visitors: Drs. Johnson of Spokane, Lieser of Vancouver, Wash., and G. S. Gordon of Vancouver, B. C.

Paper.

"The Origin of the Constituents Found in Urinary Calculi."—The paper was read by Dr. G. S. Gordon, who enumerated the constituents of different forms of calculi. All stones form about nuclei. Some cement agglutinates these salts into stone. These cements are produced by a specific chronic leucomain poisoning which causes a nephritis; this sets free the cement. Prophylaxis of stone consists of exercise, iron, arsenic, manganese and mercury; abstention from ingestion of calcium and oxalic acid; prevention of infection of the urinary tract; ingestion of water.

Dr. A. E. Mackay opened the discussion. In relation to the prevention of stone believes careful inquiry into patient's history should direct treatment.

Dr. Mackenzie: Stones are not common in Oregon. He believes primary calculi grow by simple sedimentation or crystalization. Sorry brief mention was not made of bacterial nuclei as in biliary calculi.

Dr. Johnson, of Spokane, mentions calculi in the salivary ducts.

Dr. Lieser, of Vancouver, Wash., recounts the case of a man who had a large stone.

Dr. Whiteside speaks of geographical distribution of stone formation.

Dr. Binswanger asks if urinary calculi cannot crystallize out of an aseptic solution. Asks also if uric acid is really the end product of nitrogenous material. Is it not urea? Also is the acidity of the urine due to acid phosphates? Is it not due to acid urate salts? Urea, he states, splits into carbonate of ammonia and not carbonic acid and ammonia.

Dr. O'Day speaks of crystalizing substances in an aseptic solution. He says a foreign body is always necessary.

Dr. Coffey thanks the reader for his paper.

Dr. Rockey speaks of the precipitation of urinary salts after prostatectomy. It has occurred chiefly in those cases where the bladder was septic.

Dr. Gordon closed the discussion. He spoke of the principle of crystal growth. Ebstein has dissolved out these materials. They are not typical crystals. They are affected by the colloid. This has been proven by experimentation and the microscope. The crystaloid particles of stone cannot be dissolved in water. As to bacteria, it has been found that very few stones have bacteria in the center; however, some contain them.

Dr. House shows specimens of brains.

Dr. Mackenzie reports a case of malformation of the female genital organs and apparent absence of the uterus.

The Portland City and County Medical Society met in their rooms in the Medical Building, at 8:30 p. m., Wednesday, December 21, 1910, Dr. Rockey in the chair.

Members present: Drs. Pease, House, Matson, Ettelson, A. W. Smith, Gellert, Knox, Pettit, McDaniel, Johnson, Sifton, Townley, Baird, Sternberg, Buck, Stedman, Pierce, Koehler, Sabin, Tilzer, A. E. Mackay, Hosmer, Whiteside.

Elected to membership: Drs. S. M. Strohecker and Thos. Darling.

Applications for membership: Dr. C. M. Barbee.

PAPERS.

"Protein Requirements of Man."—This paper was read by Dr. C. J. Stedman. Says man can do without fats and starches for a long time, but not without proteids. Gives exact figures of ingestion and excretion. Refers to Prof. Chittenden's experiments. These showed 50-75 gm. of proteid daily ingested. Fats and carbohydrates are eliminated as water and carbon dioxide but proteids are not so easily eliminated.

"Dietetic Treatment at Home of Tuberculosis."—By Dr. R. C. McDaniel. Tuberculosis is often a disease of the poor. The first principles of treatment are air, food and rest. Enumerates precise dictary. Proteids should predominate. Find the maximum amount each individual will assimilate and then give it.

"The Fallacies of Climate in Treatment of Tuberculosis."—By Dr. Ray Matson. Believes most patients do better at home. There is no climate which is a specific. Quotes statistics in support of his views. Describes the typical sanatorium, showing its good and bad influences. Tells of the climates of places in which several sanatoria are situated. Acclimation to exposure and proper dress are essential. Recovery is not delayed by staying at home.

Dr. Koehler opened the discussion. In regard to Dr. Stedman's paper, thinks it treats of a subject of great importance which is often slighted. Fats are of great importance. Milk is not an ideal food. Mixed diet is the best. In arranging the diet list, consider the bulk of material. The idiosyncrasies of the individual are important.

Dr. Pierce defers especially to food requirement of the tubercular persons under his care at the Open Air Sanatorium at Milwaukie. If a patient is doing well and gaining weight and enjoying food, he does not believe in forcing feeding. If not gaining weight fast enough, he gives milk and raw eggs twice or more daily. Gives details of a proper day's dietary and mode of life. The greatest value of sanatorium treatment is an educational one. It teaches the patient what to do and how and when to do it.

Dr. Tilzer discusses the papers.

Dr. Rockey recites a case of tuberculosis.

Dr. Stedman answers Dr. Tilzer's questions by saying that albuminoids are made to take the place of proteids in the dietary.

Dr. W. Stuart Leech offers two volumes of James' Fragments of Medicine for the library.

Dr. House offers the following resolutions, which were adopted:

Whereas, The revision of the health laws of Oregon upon a basis of greater effectiveness in the protection of public health and lessened burden to the taxpayers is necessary and expedient in view of the present lack of unity in our departments of public health, and

Whereas, No politician or politically chosen official should be entrusted with the duty of enforcing health laws or be given the duty of exercising protection to public health, and

Whereas, Every official agency for the enforcement of the health laws should be chosen with reference to fitness, experience, and training, and

Whereas, The medical profession of Portland and Multnomah County should always be in the forefront of the effort to improve existing conditions, and to co-operate with the proper official agencies in the dissemination of information pertaining to the conservation of health, and to visit disapproval upon those officials who fail to perform their duty to the fullest possible extent, therefore

Be It Resolved, That the City and County Medical Society appoves such a revision of the health laws of Oregon as will give the State Board of Health supervision of the enforcement of all the health laws, and at the same time constituting as the executive officers of the board and the agents of the enforcement of the health laws, the following, to-wit: The State Health Officer, the State Dairy and Food Commissioner, the State Bacteriologist and the State Veterinarian.

Be It Further Resolved, That the adoption of this resolution shall constitute authority to the chairman of this meeting to appoint a committee of five from the membership of the City and County Medical Society, such committee to confer with proper legal counsel in the drafting of a measure to be submitted to the legislature meeting in 1911, and providing for the revisions and changes above outlined.

The society met in their rooms in the Medical Building at 8:30 p. m., Wednesday, January 4, 1911, Vice-President R. J. Marsh in the chair.

Members present: Drs. Buck, Bristow, Baar, Bettman, Coffman, Coffey, Dammasch, Equi, Flagg, Ettelson, Gellert, Hyde, House, Holden, Kiehle, Kirkpatrick, Knox, Keeney, Johnson, McArthur, McDaniel, Marsh, Manion, McCollum, MacLachlan, Parrish, Richardson, Stewart, Sifton, A. W. Smith, Sternberg, Stedman, Sheldon, Murbach, Weir, Williamson, Whiteside. Visitor: Dr. Brooks of Silverton. Proposed for membership: Dr. E. H. Anthony. Elected to membership: Dr. C. M. Barbee.

The Secretary read a letter from Mr. Arthur Thayer regarding the Drug Club. On motion of Dr. House, duly seconded and carried, referred to the council.

PAPER.

"The Ocular Manifestations of Arteriosclerosis."—The paper of the evening was read by Dr. Clarence A. Veasey, of Spokane. (See Page 34.)

Discussion opened by Dr. J. A. Stewart. Speaks of the causes of arteriosclerosis. Perhaps the most important is intestinal auto-intoxication. This condition is not confined to the aged. He mentions the tortuosity of the vessels in the retina, especially around the macular region. Agrees with Dr. Veasey as to importance of early diagnosis. Urinary examination sometimes throws light on the diagnosis. Senility is, perhaps, not as frequent an etiologic factor as syphilis. Optic atrophy is caused by pressure in the optic foramen by sclerosed vessels.

Dr. Weir enjoyed the paper. In the matter of treatment he agrees with Dr. Stewart. If venous sclerosis is ever present it is secondary to arteriosclerosis. He also advocates the nitrites as a vasodilator remedy. Rest at the seashore is valuable. High frequency current is said to be of use.

Drs. Kiehle and McCollum spoke briefly.

Dr. Williamson believes all specialists and general practitioners are interested in this subject. Obstruction to circulation in any organ leads to arteriosclerosis in the vessels going to that organ. He believes veins may and do become sclerosed separately in the same way. Rest is essential whether at seacoast or mountains.

Dr. Baar states that high blood pressure eventually leads to arteriosclerosis, although all cases of arteriosclerosis do not show high blood pressure. The use of the iodides does not reduce the blood pressure. Yohimbein will reduce the pressure, but after it rises again uretan is combined with it. He uses this by injection once in two weeks. The preparation he prefers is called "vasotonin," which is such a combination. This remedy, in his experience, is far superior to the iodides.

Dr. Weir speaks of the iodides as being beneficial as rendering albuminoid molecules more easily oxidized. In spite of what Dr. Williamson has said, he does not know of any condition of the retinal vessels where sclerotic conditions exist in the veins without sclerotic arteries.

Dr. Stedman speaks of the etiology of arteriosclerosis.

Dr. Bristow speaks of the relation of old age to the age of the arteries. In treatment he thinks highly of the action of small doses of morphin.

Dr. House calls attention to the fact that arteriosclerosis does occur in old people with a very low blood pressure. In such cases a stimulant is needed, not a depressant. As a depressant he pins his faith to calomel. Optic retinitis is often associated with brain tumor. Slow pupil reaction he believes due to optic atrophy. He has also seen it in embolism in the central artery of the retina. He wishes to ask Dr. Veasey if it is not dangerous to use atropin in any individual with arteriosclerosis. Does the use of atropin in such eyes cause glaucoma?

Dr. Marsh speaks briefly.

Dr. Veasey closed the discussion. In his paper he did not attempt to write on etiology or treatment but only diagnosis and prognosis. Sluggish pupil is a very general sign. Visual changes are late manifestations. As to albumin in the urine it is apt to be small. As to the question of veins he believes them often sclerosed but not separately from the arteries. As to medicine, almost everything has been used. When the retinal vessels are sclerosed the cerebral ones are also. This, of course, is important in prognosis. He believes the prognosis is as bad as in albuminuric retinitis; usually six months to two years. As to the use of thyroid extract mentioned by Dr. Williamson, sometimes he thinks it is most miraculously useful. He does not hesitate to use a mydriatic.

Dr. Kiehle moves thanks to Dr. Veasey. Carried.

The Secretary brings to the notice of the Society a bill for registration of graduate nurses. Miss Richardson makes remarks. On motion of Dr. House, the Secretary is instructed to write a resolution approving the bill.

WASHINGTON.

KING COUNTY MEDICAL ASSOCIATION.

Pres., P. W. Willis, M. D.; Sect'y, John Hunt, M. D.

The regular semi-monthly meeting of the King County Medical Society was held in the Seattle Chamber of Commerce in the Central Building, January 2, 1911, one hundred and twenty members being present. In the absence of Secretary Hunt during part of the meeting, L. H. Redon acted as secretary pro tem.

REPORT OF COMMITTEES.

Museum Committee.—H. E. Coe reported that the Metropolitan Building Company had installed shelves and other equipment in the pathologic museum, but that a table and chairs would have to be furnished by the Society.

Committee on Public Health and Sanitation.—H. M. Read presented a partial report covering the work of the committee for the year, showing the different forms of investigation which had been made, pertaining to the health and sanitation of the city.

Committee on Press and Public Information.—M. G. Sturgis reported that the papers read before the society had gone through the hands of the committee and that the public had been informed through the daily press of matters pertaining to the health of the city.

Committee on Membership.—E. R. Kelley reported that the membership of the society had been increased by eighty during the year. It was estimated that between sixty and seventy physicians in the county were eligible for membership and should be taken in the coming year.

Committee on Program and Scientific Work.—Bruce Elmore read the report of the committee.

Banquet Committee.—N. D. Pontius reported the banquet would be held in the new Washington Hotel, January 7, at 8 p. m.

Report of Secretary.—John Hunt stated that the membership of the society is 318, of whom 312 are in good standing, 6 being delinquent in dues. During the year $1,444 was received from dues and entrance fees. The sum of $164.27 remains as a balance in the entertainment fund. Eighty new members were received during the year, 10 by transfer and 70 by election.

Board of Trustees.—L. H. Redon read the reports of the transactions of the Board since the last report, on September 5.

Election of Members.—O. C. Christmann and I. D. Long were elected to membership. The applications of C. L. Dixon and T. J. Costello were read and referred to the Board of Trustees.

Election of Officers.—The following were elected as officers of the society for the ensuing year: President, G. B. McCulloch; Vice-President, H. A. Wright; Secretary-Treasurer, H. E. Coe; Trustees for two years, J. H. Lyons and P. V. van Phul; Trustees for one year, H. E. Allen and Bruce Elmore; Delegates to the State Medical Association were elected as follows: F. M. Carroll, G. N. McLaughlin, R. J. O'Shea, G. B. McCulloch, F. T. Maxson, R. M. Stith, R. W. Perry.

The regular semi-monthly meeting of the King County Medical Society was held in the Seattle Chamber of Commerce, January 16, 1911. The meeting was called to order by President McCulloch, about 75 members being present. The minutes of the previous meeting were read and approved.

CLINICAL CASE.

Spleno-myelogenous Leukemia.—Dr. Raymond reported this case and presented a pathologic specimen.

Erhlich's "606."—Dr. Peterkin made a report of the progress of three cases to which he had given this treatment. He reported that for one or two days following the injection there was pain and slight elevation of temperature. The subsequent improvement was very slight in one of the cases of tertiary syphilis, moderate in the other and very marked in the early case.

Dr. Raymond gave an extremely interesting report of his observations and experiences at the recent Surgical Congress in Chicago.

Employer's Liability Insurance.—At the request of the President, Dr. Lyons read extracts from the proposed legislation concerning the employer's liability insurance and reported the recommendations of the Board of Trustees as follows:

"The Board of Trustees of the King County Medical Society do hereby beg to report in the matter of the bill before the legislature providing for the establishment of an industrial insurance department for the compensation of employes who are injured in the various industries of the state; first, that we are firmly in favor of the principle embodied in the proposed measure looking to the relief of injured workmen. We believe that the enactment of a wise and just law for this purpose is distinctly a progressive step forward and in the right direction.

"But we believe that the provisions of the present proposed law are not such as will commend it to the vast body of right-minded and progressive citizens of our state. We believe, further, that the present is not an opportune time for the enactment of any law on this subject, for the reason that accurate and reliable data on which such a measure should be based is not at this time available.

"The United States Government is now engaged in accumulating data on this subject, world-wide in scope, and scientific and comprehensive in character, and the results of this investigation will be available within a year or two at the farthest. These data, when available, will form a basis for national as well as state legislation and will embody the principles upon which the several states of our country will be able to enact uniform legislation on this subject. The enactment of such a law as the one proposed at this time will, in our judgment, be seriously detrimental to the interests which it is intended to promote, and at the same time will work an irreparable injury to our present and prospective manufacturing industries. We believe, therefore, that the best interests of the state will be fostered by the defeat of the proposed bill."

Dr. Willis moved that the society indorse the recommendation of the Board of Trustees and that the legislature be notified of this action. Seconded and carried.

Dr. Hunt presented a clinical case of lymphatic leukemia and showed microscopic slides. His late appearance in the program was due to circumstances which he could not avoid.

The Treasurer's report for 1910 was read and accepted and placed on file.

SPOKANE COUNTY MEDICAL SOCIETY.

Pres., H. B. Luhn, M. D.; Secty., Carroll Smith, M. D.

The annual meeting of the Spokane County Medical Society was held Thursday, January 5, 1911, at 8 p. m., in the Hyde Building. Fifty-four members were in attendance.

CLINICAL CASE.

Spleno-myelogenous Leukemia.—Dr. J. G. Matthews demonstrated this case in a man aged 27. He gave a description of the patient's symptoms and a detailed report of various blood counts, showing his improvement.

The report of the Treasurer showed a balance of $587.00 in the bank.

The Secretary's report showed that the society had, during the year, 165 members. One member resigned and one was expelled. Dr. J. M. Kelly, Rockford, Wash., died. The society held 17 meetings during the year, the average attendance being 35. Thirty-two papers and fifteen clinical cases were presented. The Secretary collected during the year, $1,164.50, and there is still due the society in dues and fees, $516.00.

Applications of Drs. J. M. Audic and Charles E. Butts for membership were read and referred to the Board of Censors. An affiliation application of Dr. Phillip Donohoo from the Walla Walla Valley Medical Society was also read.

Dr. N. M. Baker proposed an amendment to the by-laws changing the meetings from the first and third Thursdays of each month to the second and fourth Thursdays, so that the society can secure dates for meetings in the assembly hall of the new Old National Bank Building.

In the annual address of the retiring President, Dr. Luhn thanked the members for the support given him this year and congratulated them on the successful year they had made. He urged the members to display the same or even greater interest this coming year and importuned them to pay their dues and fees promptly. He spoke of the advantages of an incorporation and advised the society to incorporate this year. He recommended the making of a standing membership committee whose duty it would be to get all the ethical and eligible physicians in the county to join the society. He also emphasized the advantages of social features and advocated other social gatherings than the annual banquet.

Officers for 1911 were elected as follows: E. M. Olmsted, President; W. W. Mackenzie, First Vice-President; H. P. Marshall, Second Vice-President; Frank Hinman, Secretary; C. M. Doland, Treasurer; X. L. Anthony, Corresponding Secretary; H. B. Luhn, Chairman, A. R. Cunningham, N. M. Baker, Board of Censors.

BOOK REVIEWS

Edited by Kenelm Winslow, M. D.

The Prophylaxis and Treatment of Internal Diseases. By F. Forcheimer, M. D., Prof. of Medicine, Medical College of Ohio; Physician to the Cincinnati and Good Samaritan Hospitals, etc., etc. Second Edition. Cloth. 712 pp. D. Appleton & Co., New York and London. 1910. Price $5.00

In October, 1906, we wrote, upon the first appearance of this book, that "This work is one of more than ephemeral interest and will prove a genuine addition to medical literature, which can be said of but few publications." The lapse of five years has made this prophecy come true. Twenty thousand copies of this book have been printed within that period, which, if the pun be allowed, "speaks volumes." The work has been completely rewritten, but the original scheme has been adhered to, i. e., to recommend only those remedies which have proved of value to the author or at least have been recommended by reliable observers. The book differs from most works on thereapeutics in being written by a clinician of enormous experience from the clinical rather than the drug side of practice. Instead of enumerating all the drugs that have ever been used in the treatment of a disorder the reader is saved much confusion of mind by the sifting process which has been undertaken for him by the author. The greatest praise which can be awarded the book is that it represents a high order of common sense applied to treatment. The special clinical indications for remedies in the varying course of diseases are pointed out in a way that only experience can teach. New chapters have been written on dysentery, Rocky Mountain fever, psittacosis, tropical splenomegaly, tubercular meningitis and diseases of the pancreas. The book fully deserves its great popularity.

WINSLOW.

Treatment of Diseases. By Reynold W. Wilcox, Professor of Medicine (retired), at the N. Y. Post-graduate Medical School and Hospital, etc. Third edition. Cloth; pp. 1106; $6.50. P. Blackiston's Sons & Co., 1012 Walnut Street, Philadelphia.

"Twenty-five years' teaching of more than eleven thousand medical graduates," referred to in the preface, seems to render criticism of this sage's opinions a temerarious thing. The proof-reader was hasty or careless. Numerous infractions of grammar occur. "Latter" for "last" is a commoner error. His therapeutic dosage is old-timey in liberality. Page 891 e. g.; "for chorea, seven and one-half to ten grains antipyrin three times day to a child of eight." Again, "60 to 75 gr. lactophenin in typhoid" seems reckless. He does give warning against antipyrin in typhoid as too much of a cardiac depressant. Forty-three sections, devoted to as many diseases, have been added, including many newly identified or segregated diseases, as Brill's, Riga's, Baelz's, Milroy's, Vincent's angina, progeria, neoplasm of the pituitary, etc. There are more than nine hundred titles in the index. Coming from a gentleman of the old school, surprise is felt that he neglects artificial warmth in all depressing ailments. Undoubtedly many patients die of exhaustion of vital force through lowered body-heat, that a hot blanket at opportune moment would tide over. The book before us shows an affectionate clinging to the "flesh-pots" of an older regime, though laudably abreast in delineation and history of cases. An effort seems to have been made to simplify the nomenclature of newer remedies.

CRUTCHER.

Progressive Medicine. Edited by Hobart Amory Hare, M. D., and Leighton P. Appleman, M. D. September 1, 1910. Vol. XII, No. 3; $6.00 Per Annum. Lea & Febiger, Philadelphia and New York.

In this number may be found sections on diseases of the thorax and its viscera, by Ewart; dermatology and syphilis, by Gottheil; obstetrics, by Davis; and diseases of the nervous system, by Spiller. A suggestive article by Wood Jones on the Pathway of Tubercular Infection infection in children becomes manifest in the lower and mid-dorsal regions of the spine, and in abdominal or generalied tuberculosis he postulates the following: Infection travels by the lymphatics; the region of the spine affected is due to infection from the thoracic duct which travels along it in intimate connection with the spine from the sixth dorsal to the second lumbar. At the apex, the thoracic (or right lymphatic) duct lies right on the pleura. Practical as well as anatomic evidence is adduced to show this medium of infection in tuberculosis. Gilbert's treatment of pleuritis with effusion by subcutaneous injection of 1 cc. of the aspirated fluid received confirmation by Dodal, and Marcou advocates the method in ascites. The experiments of Weil have shown that the leech-bites inject into the blood a substance which induces a local hemophilia and loss of coagulability. This appears to have a beneficent effect in pneumonia in preventing consolidation. Osler gives a most vivid and colloquial description of the causes of arteriosclerosis with impressive every-day similes to point his moral and adorn his tale. Thus, time, tension and toxins are his three main factors. As to time, much depends "upon the quality of the rubber tubing" as to the age of onset. In regard to toxins, overeating is most prejudicial leaving much waste matter. "Too much food eaten as if we were stoking the Endinburgh express, and then put the engine in the station yard to draw trucks." Such a review of current literature is absolutely essential to the progressive man.

WINSLOW.

The Practical Medicine Series., Vol. VI., Edited by Frank Billings, M. D., M. S., Head of the Medical Department and Dean of the Faculty of Rush Medical College, and J. H. Salisbury, A. M., M. D., Professor of Medicine, Chicago Clinical School. Series, 1910. Pp. 352. Cloth. $1.50. The Year Book Publishers, 40 Dearborn Street, Chicago.

The subjects covered in this book comprise the following: Infectious disorders, diseases of the mouth, esophagus, stomach, intestines, liver, pancreas and peritoneum, together with miscellaneous diseases. Under the head of urokinetic dyspepsia the attention is drawn to the frequency of nausea, anorexia, and often vomiting and diarrhea in patients with prostatic enlargement and dilatation of the bladder. There is a very interesting account of Souttar's gastroscope, which seems to promise to lift the stomach out of things unseen. Again, Boas, later on (in another section) in etiology of nausea, animadverts to prostatic trouble as a cause. A valuable abstract from Fenwick shows how gastric hypersecretion "invariably depends upon an organic lesion," usually gastric or duodenal ulcer, gallbladder disease or appendicitis. He also notes that both hypersecretion and subacidity occur sometimes paradoxically—the first in cancer of the pylorus, the second in some cases of latent appendicitis. Fenwick calls attention in another place to the fact that parotitis, occurring during the starvation cure for gastric ulcer, is due to ascending infection through the dry duct and that giving an India rubber treatment to the patient to chew stimulates salivary flow and prevents the disease. There are numerous articles by different treatments. As most cases which come to the surgeons have already been cured a number of times such articles appear to be tinged with facetiousness or fallacy. The excellence and value of this work goes without saying. WINSLOW.

Biology; General and Medical. By Joseph McFarland, M. D., Professor of Pithology and Bacteriology, Medico Chirurgical College of Philadelphia. Octavio. 440 Pp., with 160 Illustrations. W. B. Saunders Company, Philadelphia and London. 1910. Cloth, $1.75 net.

The book is scholarly, painstaking, dignified in diction, free from didactic pedantry, and lofty in reverence of creative force. "The work," it declares, "is a general biology, but problems have been considered that show man is no separate entity, apart from the general world of living things, but a unit in the general scheme, subject to the same laws that apply throughout the universe." The author declares the present state of biological science controversial; deprecates crystallizing incomplete information into laws as leading blindly from theory to theory. Teleological phenomena of nature are often confounded with biological phenomena, though investigation of either does not include the other. All biology up to the present time is a beginning whose sequel no one can foretell. We may rationalize and estimate through analogies and partly conjecture evolutionary unfoldings by the general trend of individual species and mutative habits that time and circumstances bring to each type. The mistake of scientific men is grouping into exclusive physical conditions to explain, physical phases. Selective of facts, cautious in argument, conservative in conclusion, the author is needlessly hopeless of science ever knowing the origin of matter of force. But Dr. McFarland is yet of plastic mind. Men of forceful ideas can afford to take advanced stand on the frontiers of speculative thought, toward which outposts other pioneers may strive, reconnoitering unexplored byways en route. It was thus that Newton gave us his discoveries in physics. CRUTCHER.

Progressive Medicine. Vol. XII No. 4. December 1, 1910. Lea & Febiger, Philadelphia and New York. Pp. 360; paper. $6.00 per annum.

This is perhaps the most interesting number of the year. In it may be found sections on diseases of the digestive tract, by Levenson; diseases of the kidneys, by Bradford; surgery of the extremities, shock, anesthesia, infections, fractures and dislocations and tumors, by Bloodgood; genito-urinary diseases, by Belfield; and practical therapeutic referendum, by Landis. More and more are chronic gallbladder troubles, appendicitis and ulcer coming to be appreciated as causal factors in stomach disorders. Thus, under increased hydrochloric acid secretion in various articles these factors are included and the same is true of pyloric spasm. The fact that lavage of the stomach is thought to be the best treatment for hematemesis will be a surprise but there is much to bear out the results of Kauffmann's and Kussmaul's experience with this method. The general applicability of iodin in skin disinfection, the harm which may be done by saline infusions, the therapeutic value of human serum injections may be noted. Landis' review of the advances in treatment during the year has great practical worth. WINSLOW.

A Text Book of General Bacteriology.—By Edwin O. Jordan Ph. D., Professor of Bacteriology in the University of Chicago and in Rush Medical College. Second Edition, thoroughly revised. Octavo of 594 Pp., Illustrated. Philadelphia and London. W. B. Saunders Company. 1910. Cloth, $3.00 Net.

In the second edition of this work one finds a few changes, but not of great importance. The time which has elapsed, one year, since the appearance of the first edition, speaks for itself as to the great popularity of the work, and indeed no book has appeared for a long time which is so broad in its scope as this, marshalling, as it does, the great host of facts accumulated in the past few years by research workers throughout the world, without getting too technical or verbose. It is something new to find chapters on the relation bacteria play in the arts and sciences, and also to find some of the necessary medical factors of the diseases inserted without losing sight of the subject in hand. It is not only a good book for the student and general practitioner, but for the specialist and laboratory worker as well, for in the broadness of its scope and the terseness of its detail it has no equal.

PASCHALL.

Text Book of Obstetrics. Including Related Gynecologic Operations. By Barton Cooke Hirst, M. D., Professor of Obstetrics in the University of Pennsylvania. Sixth Revised Edition. Octavo of 992 Pp., with 847 Illustrations, 43 of them in colors. Philadelphia and London. W. B. Saunders Company. 1909. Cloth, $5.00 net; Half Morocco, $6.50 net.

In the sixth edition of this work the subject matter throughout has been thoroughly revised. There have been changes and important additions here and there, and Part VI., devoted to obstetric operations, has been largely added to. We cannot agree with the author in his statement that all the major gynecologic operations are as much a part of obstetric operations, as the application of forceps. We believe that they should be left to works on operative gynecology, where more space may be devoted to them and where a greater variety of operations may be described. Be that as it may, there now appears in this section some good operation for each of the more important surgical complications of obstetrics. As a textbook on obstetrics for medical students, it is unquestionably one of the best, the illustrations are exceptionally good and this edition covers the subject thoroughly but briefly and brings it up to recent date. CHESSMAN.

Medical Gynecology. By S. Wyllis Bandler, M. D., Adjunct Professor of Diseases of Women, New York Post-Graduate Medical School and Hospital. Second Revised Edition. Octavo of 702 Pp, with 150 Original Illustrations. Philadelphia and London. W. B. Saunders Company. 1909. Cloth, $5.00 net; Half Morocco, $6.50 net.

This is eminently a work for the general practitioner. The care necessary for successful diagnosis is well emphasized in his lengthy chapter on gynecologic examination. The sections on constipation, venereal diseases, and pessaries are unusual in detail and very excellent. The value of baths and electricity is well set forth. Ectopic gestation is thoroughly discussed. The subject of associated nervous conditions in gynecology, often too carelessly considered, is well worth careful reading. The literary style and illustrations are excellent, and on the whole the book is unusually good. HYDE.

Error in paging in this number

NORTHWEST MEDICINE

The Journal of the State Medical Associations of Oregon, Washington, Idaho and Utah
ISSUED MONTHLY BY NORTHWEST MEDICAL PUBLISHING ASSOCIATION.

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DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF THE PACIFIC NORTHWEST
Subscription Price $2.00. In clubs of twenty or more $1.00.

Entered March 14, 1903, at Post Office, Seattle, Wash., as Second Class Matter, under Act of Congress of March 3, 1879.

VOL. III. New Series. MARCH, 1911 No. 3

ADDRESS

THE VALUE AND HANDICAP OF THE MEDICAL PROFESSION.*

By Hon. J. T. Ronald.

SEATTLE, WASH.
Judge of Superior Court of King County.

I speak tonight to men whose skill is necessary at the cry which announces the beginning of an earthly career and whose presence is consoling and comforting at the groan which pronounces its ending. Throughout this earthly career, from its first cry till its last groan, to your profession there is committed the highest, the holiest, the most sacred of earthly trusts—the power of life and death.

Daily we read of the death of some national or international character whose only claim to fame was his ability to amass great wealth, or to succeed in the fickle game of politics. A great funeral is held; eloquent orations are pronounced; influential newspapers carry long editorials in draped columns extolling the qualities of the great financier, or the great politician whose death has left an unfilled void in the world. He controlled Wall Street, or possessed the secret power of influencing voters; he was able in the field of finance to prevent the assault of the bulls or the ravages of the bears in the stock markets; or perchance, in the field of politics, to encompass the defeat of his enemy and to dictate the election of his favorite.

All this exploitation of qualities, this extollation of so-called virtues, naturally creates within the mind of the young man, aspiring and ambitious, the impression that the deceased was an exemplar of true greatness, that to cultivate the cunning he displayed, to emulate the example he manifested is the surest road to true and lasting fame. And yet, the question arises: Is the sum of the achievements of such a career the true standard for estimating the value of a human life? I think not. The true estimate of a man's life is measured not by what that life draws out of the world, but by what that life invests, that is, puts into the world. The obscure man who conceives, or inaugurates, or achieves something of substantial benefit to posterity earns and is accorded an honest appreciation and a glorious fame, which glow with ever increasing gratitude long after the ephemeral brilliance based solely on cunning or sordid wealth shall have burned out and been forgotten. Pasteur and others of his kind in your profession will live in the hearts of men and women long after granite shaft and marble column shall have crumbled into dust.

Judged by this standard, we can easily and justly measure the value of your profession. To a layman it must be considered in two aspects: First, its value to the living; and, second, its value to posterity. According to my way of thinking, your value to the living is but a fraction of the value of your profession to the world, for if your skill, your training, your experience, together with all these new discoveries and mighty agencies which modern scientific research is placing within your control cannot be availed of to benefit posterity, then the value of your profession is but little more than that of a sordid business. That your training, your skill, your experience, and these powerful agencies can be so used in one generation to benefit the coming generations goes without question; that they will be so used depends upon you professional votaries of the living generation. Because of your skill, your training, and your experience, and with your resultant control of these powerful agencies due to the development of modern science, your profession can do more to create and develop for posterity a virile manhood, a virtuous womanhood, a manly, moral, sober, progressive race of people than all the other professions or occupations of life combined. With this superlative power and opportunity there devolves upon you the corresponding responsibility.

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*Read at the Annual Banquet of King County Medical Society, Seattle, Wash., Jan. 7, 1911.

In speaking thus of the medical profession, I use the word "profession" in its proper signification. I am aware that in all professions and occupations there are two classes of votaries or practitioners. One class make a *business* out of their profession. This is a false ideal. The business man, operating strictly a business, who makes a *profession* of his business, outstrips, in the long run, his business rival whose ideals never rise above, whose view point never goes beyond the short temporary expedients of a merely sordid business. So in the professional world, that practitioner who makes a sordid *business* out of his profession, forgetful of its precepts and its ideals, uses it only as a stepping stone for wealth, will sooner or later be weighed in the professional balance and found wanting. To apply this idea to your own profession, and with no personal reference to any individual, it cannot be denied that some physicians seem to be inspired with the idea that money is the principal object of their profession; that the relief of suffering is an incident; that afflicted and helpless human beings are too often regarded as mere tools of their trade, subjects for their exploitation or experimentation; that the getting of patients is the primary, the curing of them a secondary consideration, unmindful of the fact that *curing* patients or saving limbs is the best and most meritorious way of *getting* patients.

This neglect of the true ideals, this commercializing of an honorable profession has bred all sorts of foolish fads and pernicious fakes and, understanding too well the deplorable fact that the faked patient is generally the most appreciative patient and the best "booster," these practitioners who make a *business* out of their *profession* too often deceive patients, too often ignore the needs of their charge, too often frighten parents into assent to surgical operations, oftentimes useless and many times positively injurious, in order that they "may get credit for performing remarkable cures, charge large fees and gain unmerited reputation."

The lofty ideals of a glorious profession, which has produced some of the noblest and most self-sacrificing types of men with which this world was ever blessed, are prostituted by these *business* professionals to the get-rich-quick style of graft which, rapidly developing in this twentieth century, is producing too many insane, too many suicides, too many criminals.

Hence, in speaking of the medical profession, I do not refer to that class. I have in mind my own ideal of the doctor, the true physician, that "Friend of Man," imbued with the lofty ideals of his profession, whose education and training have developed in him those divine qualities of compassion and sympathy; a man of exalted aims, scrupulous honor, who exercises his best skill and employs these agencies which modern science enables him to command, to true "humanitarian ends and not as instruments of mere self-aggrandizement." He hears the groan of the suffering above the clink of metal. He derives more honest satisfaction in the skill enabling him to save a human life than in the possession of all the cunning of Wall street.

Gentlemen, you are educated in a science, trained and skilled in a profession whose mission is to make mankind better, cleaner, to bring about a condition which will insure a healthier posterity; yet I hope I will not be charged with abusing the privilege of guest when I say that, in my opinion, you are the victims, unwilling victims I have no doubt, of a code of ethics, to some extent medical, which you can amend, but principally and largely legal, which you cannot circumvent, but which as applicable to some conditions is more vicious and baneful in its effects upon society than violence or anarchy. May I be pardoned if on this occasion I express an opinion, now gaining astonishing prevalence among laymen and lawyers and judges, that much of the suffering endured by mankind could be avoided by observing a little less ethics and more humanitarianism; and again, that many of these weakly, emaciated people, whose existence is a misery to themselves and a menace to society; that thousands of the murders committed every year are due to your silence and inaction enforced, I believe, against your revolting impulses, by this so-called code of legal ethics, against which you cannot under present conditions rebel. This opinion questions not the honor, impugns not the humanity, derates not the manhood of the individual members of your profession. It is against a system, evolved long before you came upon the stage, a code of legal ethics not in harmony with the spirit of justice and humanity of this enlightened age that it inveighs.

How often have you been solicited to perform a criminal abortion? You refused. The woman, unlike the natural mother who will risk her life for her offspring, being determined to risk hers to destroy her offspring, told you she would procure somebody else to do the murder. You knew she could and that she would. Could you do anything to stay her hand—anything to prevent the destroying of that life? You could but for this law have prevented it. The courts were open and at a word from you that blow could have been stayed. You cannot speak the word. Your lips are closed. Her communication is privileged and even after the murder has been committed by the "somebody else" whom she procured, and after your subsequent treatment to save her life which she had put in jeopardy in her effort to destroy her offspring, you are not allowed to tell the truth in a court of justice. Why should you honorable men be forced to become *particeps criminis* to this murder of the innocent? You must seal your lips and allow the abortionist to go free to repeat his bloody calling.

You have read in your reliable medical statistics that one case in every six of pregnancy in this country results in an abortion; that probably two million homes in this country never knew the smile of a child. This wholesale slaughter of infants cannot be punished because you are not permitted by the law to tell the truth. Only nine states of the Union make it a felony for a woman to procure an abortion. In thirty-five she is not punishable. Thirty states have no law on the subject of selling or advertising abortive drugs. In only fifteen is abortion cause for revoking the certificate of the doctor committing the act. Only one state—Missouri—permits a doctor who gives subsequent treatment to testify. Why should men whose mission is the uplifting of mankind, the relief of suffering, be the enforced victims of a code which forbids them to uphold the law, and forces them to become accessory before and accessory after the fact, of murder, unwillingly to commit two crimes? You don't want criminal practice, you spurn it; then why longer submit to a code that forces you to protect the criminal practitioner? Why not have the legislature repeal a law that compels you to stifle your best impulses?

I need not tell you what you have read in your reliable medical journals, that eighty per cent. of blindness and seventy per cent. of abdominal pelvic operations are due to gonorrhea, from which more than sixty per cent. of all men suffer at some time, and eighty-five per cent. of cases occurring in married women are contracted innocently from their husbands. I read where Dr. Morrow, President of the American Society of Sanitary and Moral Prophylaxis, said: "Probably not less than 450,000 cases of gonorrhea and syphilis occur every year in the United States among young men. Hospital statistics seem to indicate that twenty per cent. of our young men contract venereal diseases before their twenty-first year; sixty per cent before their twenty-fifth year, and eighty per cent. by their thirtieth." And I also read in one of your medical journals of acknowledged authority that "the people infected actively or otherwise with these diseases are so numerous that the 120,000 physicians of the United States and Canada would not, even if all became venereologists and applied themselves to these examinations alone, have time to care for those patients whose ailments are of an uninfectious character."

According to the report of a special commission appointed a few years ago to study the result of the social evil, New York City was estimated to have 200,000 syphilitics and to present annually 50,000 people newly infected. Forty-two per cent. of all spontaneous, non-criminal abortions are caused by this disease. It claims more victims in the United States than tuberculosis or alcoholism. The tainted children and miserable adults show it to be the greatest agency of race suicide and degeneration.

These are estimates based upon hospital statistics; they do not include the many unheard-of cases who consult the private doctor or the sexual quack. Society is indifferent to the situation. Why? Society doesn't know the facts.

Your profession should procure the establishment of a National Bureau of Health, a uniform system of laws in all the states relating to genitourinary diseases and other subjects vitally affecting the health of the living and the happiness of posterity. No profession, no body of men, have been so useful, have accomplished so much for humanity as the medical profession during the past generation. Surgery thirty years ago is butchery today. You have mastered intestinal and abdominal surgery, stayed the ravages of cholera, and the bubonic plague, conquered sunstroke, diphtheria, yellow fever and smallpox, confined hydrophobia to one per cent. of cases subjected and, unless the antivivisectionists control legislatures, you will in the near future effect the conquest of tuberculosis and cancer. You know the functions of practically every cubic inch of the brain tissue, and by symptoms can tell the injury to any particular area. With such a record, why should you be longer handicapped with a degrading and disaster breeding code, on the threshold of new and scientific discoveries which will startle this world, May I, in closing, without being considered presumptious, express in this connection one further suspicion, perhaps unfounded, but suggested by observations as lawyer and judge? Did it ever occur to you that there are in this country too many medical colleges either without proper appreciation of, or without suitable equipment to meet, the necessities of modern scientific practice? Joint stock medical colleges are becoming as thick as religious institutions. State universities, without proper appreciation of the necessities, and without adequate equipments or adjuncts, but merely to have completeness of curriculum, are installing departments of medicine. These numerous colleges and state institutions by their manner of advertising in this commercial age tend too much, I fear, to create a belief that proficiency in medicine and surgery is guaranteed with a diploma, the obtainment of which parchment is a trivial matter secured by the application of but ordinary attention and moderate labor. This suspision, if true, will have a tendency of inducing young men, insufficiently grounded, to enter your ranks. It seems to me that there are about as many different standards of educational requirements as there are medical institutions, with a resulting average general standard in this country below that of any nation in Europe; so that too many inexperienced and poorly trained, and unequipped young men are thus licensed to exercise the high calling, the fruits of which are life or death; that according to population we have four or five times as many physicians here as in the countries of Europe.

Are we surrounded by more unsanitary environments, subjected to more unhealthy conditions, or living in a more unhealthful climate than Europe? With such an awful responsibility as your profession must necessarily exercise, why not inaugurate a condition that, even though it may leave fewer colleges, will nevertheless result in starting the young physician out with the best equipment, the best preparation, and the best clinical and laboratory training which modern science can afford? The fact that we have medical laws attests your own lack of confidence to some extent in the thoroughness of some of your medical colleges; yet I venture to ask, if the test such laws prescribe, viz.: the ability to pass an examination for a few hours before a board, afford any better qualification for actual healing than the applicant possessed before his examination?

In conclusion, permit me to express the opinion that no profession, no body of men, can accomplish so much good for humanity as the medical profession, and that you have but to do a part of what you, and you alone, can do to prove that, of all, your lives are of the greatest value to the world, because your investment brings the greatest returns.

ORIGINAL CONTRIBUTIONS

THE TREATMENT OF JOINT INFECTIONS BY ASPIRATION AND INJECTION OF TWO PER CENT. FORMALIN IN GLYCERIN.*

By Clarence L. Poley, M. D.
PORTLAND, ORE.

Probably no parts of the human anatomy give more anxiety to the physician as regards end results than do inflammations of the larger joints. This is largely because of their high vulnerability to trauma, bacteria or their toxins introduced from without or hematogenously. The etiology is often more or less obscure, also the pathology. Either ill-advised or delayed treatment may lead to horrifying conditions. The exploration of a joint cavity, says Bryant, through a free incision for the purpose of diagnosis or possible removal of the offending cause, should not be attempted unless it shall appear that the inflection and its consequent effects on the joint are of equal significance to those ensuing from the exploratory practice.

While phenol solutions and iodoform suspended in glycerin have long enjoyed general usage in effusive joint affections and done much good, for only four or five years has formalin been used to any extent, and that in the hands almost exclusively of Dr. John B. Murphy, in whose service I had sixteen joint cases under this treatment. So far no literature on the subject is out, Dr. Murphy's first paper now being under progress.

My purpose in presenting this paper is not to proclaim a "cure all." The treatment is relatively new, so I shall devote my time more to the technic and state the indications which from my limited experience with it seem most adaptable to its use. I shall quote freely from Dr. Murphy's monograph on "Ankylosis" and from Lexer-Bevan on "Pyogenic Infection of Joints."

Experimental work on joints in dogs is unsatisfactory on account of difficulty in controlling infection and motion but we are satisfied beyond doubt that formalin is stimulating and healing by its employment for ulcers and sinuses alone. Beck's paste, a modification of the Morhof-bone plug, contains one per cent. formalin in vaselin, bismuth, paraffin and white wax as a base. Osteomyelitic cavities can be filled with the glycero-gelatin-formalin plug (one or two per cent.) Poured into the cavity in the warm liquid form it solidifies quickly. It is powerfully antiseptic and non-necrotizing. It greatly stimulates tissue regeneration. If thin flat discs, cut to fit down over indolent ulcers, are kept in close, constant apposition by bandage compression, the moulds show considerable absorption from under their surface in three to four days. Noninfected prepatellar bursitis cases are curable by low formalin percentage in glycerin.

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*Read before the Portland City and County Medical Society, Portland, Ore., Jan. 18, 1911.

Meisenbach, of Buffalo, made radiographic and microscopic studies of the effects on bone growth by influencing the cellular structures of the epiphyseal cartilage. Forty-two rabbits were injected. Various substances were used, such as sterile water, sterile graphite, tincture of iodin, phenol, ninety-five per cent. alcohol, pure formalin and two per cent. formalin. Only the latter two gave positive results. In injected tibiae, portions of the epiphyseal line were replaced by new bone and ossification hastened. Microscopic changes were an increase of endothelial, endochondral and perichondral bone.

Synovial, cartilaginous and osseous ankylosis follows several types of arthritis. A recapitulation of acute joint inflammatory conditions may not be unappropriate at this time:

Acute articular rheumatism; multiple serous arthritis, as develops during the course of an endocarditis and resembles rheumatism; primary hematogenous fibrous arthritis; nontraumatic dry fibrous arthritis; traumatic fibrous arthritis with or without fracture; serous and suppurative arthritis occurring in the course of infections which afford atria for pyogenic cocci (diphtheria, scarlet fever, measles and smallpox), or for the specific microorganisms of the disease alone or combined with other bacteria (typhoid fever, pneumonia, gonorrhea, erysipelas, epidemic meningitis, influenza, enteric diseases). Not only staphylococci and streptococci but also the rarer forms of pyogenic bacteria, among these the bacillus of pneumonia and the meningococcus, are found in the different forms of arthritis. The staphylococcus and streptococcus produce particularly the severe but are also found in the mild forms.

But it is the suppurative type of arthritis which most frequently results in ankylosis and of this the hematogenous variety is the most severe and destructive. Primary pyogenic infections result from gun shots, contusions, puncture wounds, dislocations and fractures; secondary infections from an adjacent phlegmon, erysipelas, acute and chronic osteomyelitis, and tuberculous osteitis (primary tuberculosis synovitis occurring perhaps less commonly). The cryptogenetic variety is more severe and destructive to the elements of the joint than the metastatic, the sequelae of typhoid, scarlet fever, pyemia, measles, diphtheria, or gonorrhea. Primary ossifying arthritis is rare and intractable to treatment. Static adhesive arthritis is a fibrous synovial fixation involving also periarticular cicatrices.

According to character of their exudates, forms of synovitis are designated as serous, fibrinous and suppurative. Acute serous and sero-fibrinous synovitis is a mild form developing secondary to open injuries of the joints; encapsulated suppurating foci in the epiphysis and to adjacent inflammations; in the infectionus diseases, pneumonia, typhoid fever, gonorrhea, etc., and especially in general infections. Without any pathologic changes in the articular cartilage or bone, the distended capsule may permit flail joint and luxation, for example in typhoid fever, scarlet fever and smallpox.

Acute suppurative synovitis may be superficial or deep. The supperficial type is mild and yields a profuse, mucopurulent exudate. It is caused most frequently by staphylococci, streptococci and pneumococci. Streptococci and pneumococci are found relatively frequently in catarrhal, suppurative inflammations of the joints, occurring in small children, now and then in inflammations associated with small osteal foci. The deep suppurative type is not limited to the synovial membrane.

Hematogenous joint infections occurring in the course of gonorrhea, pneumonia and typhoid fever are most interesting. Pregnancy, labor and the puerperium favor the development of this metastatic infection in women. Gonorrheal infection of a joint may produce a serous, seropurulent, serofibrinous, serohemorrhagic or purulent exudate. All pathologic types from a simple hydrops to a suppurating and phlegmonous condition may exist.

Tuberculosis of joints follows hematogenous infections. Primary synovial infection, according to König, occurred in seventeen per cent of his cases and a number of osteal foci must be regarded as secondary to synovial tuberculosis, according to him. The contents of the joint are first serous. Purulent exudates are rare. Three pathologic types are found —serous, granulating and ulcerative.

An inflamed pharynx or tonsil affords atria for joint infection. Chronic, serous synovitis depends in its etiology on rheumatoid arthritis, hemarthrosis, foreign bodies, arthitis deformans, tuberculosis, syphilis, and neuropathic arthritis.

With this rather comprehensive review, for which I beg to apologize, I will pass to the subject of treatment. It is primarily to prevent ankylosis—synovial-fibrous, cartilaginous or osseous. Stiffening, deformity and trophic changes are the most important sequelae of inflammations of joints. To avert these, we aspirate at once accumulations of fluid under pressure, rapidly undermining or destroying the cartilages, and inject two per cent. formalin in glycerin which, as stated, is stimulating, healing and powerfully antiseptic. (Fig. 1.) Extension by weight and pulley keeps the ends of the bones separated and immobilizes the parts in the most useful position, should ankylosis result. (Fig. 2)

Logical reasoning would lead us to believe that there are increased protective substances or bactericidal bodies carried to the injured tissues by the artificial hyperemia produced, the same as in venous hyperemia or Biers' dry hot air apparatus. Emigration of leucocytes and accumulation of bactericidal bodies is induced in every form of hyperemia. Leucocytes ingest bacteria, especially tubercle bacilli and gonococci when thrown out into the tissues but, as accomplished by Bier's hyperemia, is very painful to acute joints and the good may and often is far surpassed by the damage done.

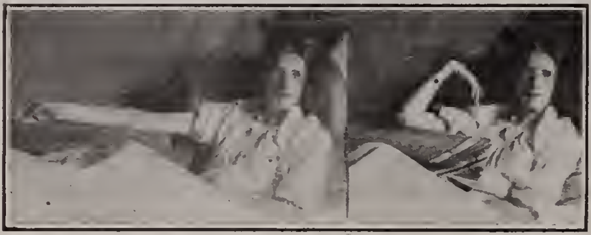

Fig. 1.
Crypotogenetic infection—showing extension and flexion after second injection of 2 per cent. formalin in glycerin.

Indications.

It is in acute and subacute joint inflammations that we claim the greatest percentage of cures. It is far from my mind, however, to lay down hard and fast rules for this method. Success depends on careful selection of cases. Many acute and subacute effusive cases are rapidly cured. We inject the larger joints five or ten days previous to the time they may be opened for any cause, as resection, etc., the purpose being to stimulate the tissues to healthier resistance against infection. I would place this as a very important indication. Tuberculous synovitis gives brilliant results under this method. We give 5 mg. of Koch's old tuberculin subcutaneously to aid the history and radiograph in the diagnosis.

Fig. 2.
Cryptogenetic infection; both knees and right elbow under extension.

Summarizing on acute cases, I will quote Dr. Murphy: "Ankylosis of joints occurs only when bony surfaces come into contact. Therefore, in acute joint affections to prevent ankylosis, extension should be put on. Tension must be relieved not by incision, as that leads to obliteration of the cavity, but by aspiration. Following aspiration there is injected into the joint a two per cent. dilution of liquor formaldehydi in glycerin."

I have never seen injected a hyperacutely inflamed joint, nor have I seen or heard of necrosis following the use of formalin according to this method in other cases, but in hyperacutely inflammatory and painful joints I should be tempted to put on extension, aspirate and delay injection till the inflammation begins to subside, personally believing that hyperemic agents do harm in these rare cases.

Results may be palliative only, in conditions of beginning fibrous ankylosis where general anesthesia is necessary to break it up.

Preparation of the Solution.

To each ounce of glycerin add ten drops of formalin. Put into a sterile glass stoppered bottle and shake well. Perhaps it is not necessary to sterilize the glycerin but we do. (Steam sterilizer under pressure.) This solution keeps indefinitely. The solution must *never* be used unless made up 24 hours previously.

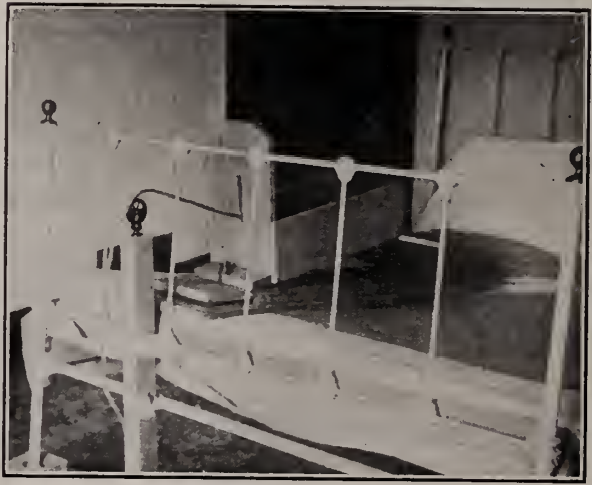

Fig. 3.
Railroad splint for knee extension. Ten-inch blocks under foot posts

Preparation of the Patient.

If a knee is to be treated, the thigh and leg are shaved, scrubbed with soap and water and a sterile pad bound to the joint the evening previously. Before the operation the extension apparatus is applied so that the weight may be swung immediately after the injection. (Fig. 3)

We use for the knee the railroad splint, photographs of which are shown. It consists of a double inclined plane, and Buck's extension. Height is adjustable from the horizontal to a right angle by a thumb screw at the lower end. The short and long arms of the incline are united by strap hinges and thumb screw to the sliding board which moves with the patient up or down in the bed. The triangular apparatus "railroads," so to speak, on rollers between quarter rounds on the baseboard. The baseboard should be prevented from sagging with the mattress by a crossboard underneath it resting on the side rails. From twenty to thirty pounds weight, enough to overcome muscular spasm and secure extension is employed. Ten-inch blocks under the foot posts not only secure additional extension but prevent the apparatus lodging against the foot of the bed. Adhesive straps for extension are applied to the sides of the leg up to the level of the tuberosity of the tibia, care being observed to protect the external popliteal nerve from pressure. The heel and popliteal space are well cushioned by cotton pads, another of which between the ball of the foot and end plate overcomes tendency to foot drop. (Fig. 4)

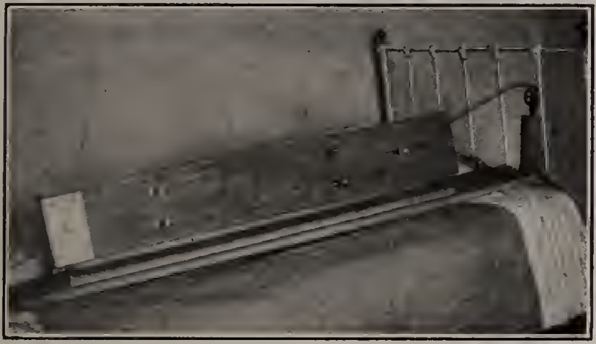

Fig. 4.
Railroad splint, showing rollers on the base.

ARTICLES NECESSARY FOR AN INJECTION.

Tincture of iodin. Ordinary aspirating syringe and a graduated formalin and glycerin syringe, both of which fit the aspirating needle.

Ethyl chloride and a small sharp-pointed scalpel. (Nitrous oxide or ether anesthesia is much preferable to local anesthesia on account of the intense pain following injection and not infrequent difficulty in entering the joint, e. g., the shoulder.)

Sterile graduate for aspirated fluid.

Solution for injection. (Do not carbolize the aspirating needle.)

Cotton and collodion.

Culture material.

An especially graduated glass injecting syringe was constructed with a screw plunger, each turn representing one cc. of solution.

TECHNIC OF INJECTING THE KNEE JOINT.

The joint having been painted two coats of tincture of iodin, each allowed to dry, and the patient anesthetized, the aspirating needle is pushed into the joint just beneath the outer edge of the patella. Free motion of the needle indicates that the cavity has been entered. The fluid is aspirated and the needle clamped by an assistant with an artery forcep. The aspirating syringe is taken off and the injecting syringe screwed on, and about one-half ounce of the solution slowly injected, the joint being completely filled. Equal distribution of the solution to every part of the joint cavity should be secured by flexion, extension and massage. A cotton collodion dressing is applied, the weight swung into place and the patient given one-fourth grain of morphin immediately. A second morphin injection may be necessary in four or six hours, but after this the patient is very comfortable and would not allow the weight to be removed. Cultures and animal inoculations accompanying the first aspiration are very interesting and instructive.

The reaction which takes place manifests itself on the second day by a diffuse hyperemia. The skin assumes a delicate pink hue. An ice bag can be applied for two or three days if necessary. On the fourth or fifth day swelling begins to recede and pain becomes less severe on passive motion. The weight can now be removed daily and the joint massaged and passive motion instigated.

As I have said, the solution is stimulating, antiseptic and lubricating. Extension permits the solution between the separated bone ends. Should passive motion be hindered by adhesions, they should be broken up gently under nitrous oxide.

Swelling, pain on passive motion and inflammation are the best criteria for succeeding injections. The interim is usually ten to fourteen days. Two injections are often sufficient, but as many as five are warrantable before giving up any case.

After the last injection, a tuberculous case is allowed to walk on crutches four to six months, wearing a long, three-fifths, circular cast and receiving tuberculin injections of five to ten mg. once a week for the same period of time. X-rays daily are advised during the course of the formalin injections or longer.

My experience with the sixteen cases is as follows:

Tuberculous synovitis of knee, 4 cases; 2 injections, cured.

Tuberculous synovitis of knee, 2 cases; 3 injections, cured.

Tuberculous synovitis of knee, 1 case; 5 injections, improved. (This case had tuberculous caries of the ribs with external fistulae.)

Tuberculous synovites of knee, child aged six; 2 injections, cured.

Traumatic synovitis of knee, 1 case; 2 injections, cured.

Floating semilunar cartilage with synovitis, 1 case, unimproved.

Chronic synovitis shoulder, 1 case; 2 injections, unimproved.

Following operative correction of genu valgum (synovitis), 1 case; 2 injections, cured.

Beginning fibrous adhesions both hips, male aged 50; 3 injections, unimproved.

Beginning arthritis deformans both hips, male aged 55; 3 injections, unimproved.

Cryptogenetic infection both knees and right elbow; 3 injections, cured.

Duration of last case was one and one-half years. Patient went to a specialist for removal of her tonsils. Thinking them the arteria of infection, he referred her later for injection of the affected joints.

In conclusion, the treatment with formalin and glycerin has given us good results. The results are improving rather than diminishing as we are more careful in the selection of cases and in the detail of its administration.

1144 Union Ave.

DIAGNOSTIC SIGNIFICANCE OF MUCUS IN THE TEST MEAL.*

By Herman P. Marshall, A. B., M. D.,
SPOKANE, WASH.

A paper limited to the consideration of mucus in the test meal may, on first thought, seem somewhat uninteresting and unprofitable, but when one investigates the mistaken diagnoses which result from a misinterpretation of its significance, its importance becomes more apparent. My interest in this subject was first awakened about seven years ago, when an intimate friend of mine was told by a prominent gastrologist, after repeated gastric analyses, that he was suffering with chronic gastritis. After eight months of unsuccessful treatment by the "stomach specialist," the patient consulted a general practitioner who, after a careful study of the anamnesis and status presens, without gastric analysis made a diagnosis of chronic appendicitis. About two months after an appendectomy he told me that he had absolutely no stomach symptoms and had gained considerably in weight and strength.

The object of this paper is to present briefly my views on the diagnostic significance of mucus in the test meal, based on personal observations extending over seven years. Possibly with further experience I shall be forced to change them somewhat. One should be careful to exclude the mucus originating from the esophagus and buccal cavity during the collection of the stomach contents.

The most common conditions in which an over-production of gastric mucus may take place are: (1) Chronic gastritis (before atrophy takes place); (2) Appendicitis, (3) Gallbladder trouble, (4) Neurosis.

There are, I believe, other conditions which may give rise to an over-production of mucus but, inasmuch as this is a preliminary communication, I prefer to limit my remarks to the most common and easily demonstrable conditions, reserving the others for a more extensive paper which I intend preparing when, as the result of a more extensive experience, my views shall have become clearer.

Chronic Gastritis. We are led by the standard text-books to believe that the diagnosis of chronic gastritis is comparatively easy. In my opinion this is far from being true. One author says, "In catarrh of the stomach mucus is so abundant that the contents can be poured in a lump from one beaker to another." To my mind this is very misleading, as a case of chronic gastritis may, when it first presents itself to the physician, not have an over-abundance of mucus, and an excessive amount of mucus may be present in the absence of a causative gastritis.

As a matter of fact, the diagnosis of chronic gastritis is at times very difficult and the presence or absence of mucus in the test meal has very little diagnostic weight. The diagnosis must be made from a careful study of the anamnesis and status presens, plus repeated gastric analyses. Even then one may be ultimately forced to make the diagnosis ex juvantibus.

From the diagnostic, as well as the therapeutic point of view, one should remember that most cases of dyspepsia have a marked neurotic element, and it is a nice problem in differential diagnosis to determine how much of it is primary and how much secondary.

Appendicitis. It is not at all uncommon to find a marked over-production of mucus in gastric dyspepsias dependent upon chronic appendicular trouble. The more experience I have with digestive disturbances, the more disinclined am I to treat a case of chronic dyspepsia, in which there is a probability of appendix trouble, without first removing the appendix.

How often we hear the physician who does no surgery say, "I stood right there, and saw the surgeon remove a perfectly normal appendix." But was it perfectly normal? It may not have been acutely inflamed, but was it mechanically normal? Were there no adhesions fixing it in an abnormal position? An appendix bound by adhesions in an abnormal position may give rise to a symptom-complex simulating very closely chronic gastritis, including a marked over-production of mucus in the stomach.

The following casse is illustrative of this condition:

Patient, J. H., male, age 34, consulted me January, 1906.

History. Four years ago he had an acute abdominal attack, accompanied by pain and tenderness of the abdomen, vomiting, constipation and fever, which a physician in Indiana diagnosed as acute intestinal indigestion. He lay in bed only four days, but continued treatment for about a month longer. Says his digestion has never been right since. Has not been confined to bed but has had to stop work for several days at a time on account of anorexia, nausea, gas in the stomach and intestines, and abdominal pain and tenderness. He has been treated by several therapists, including osteopaths and chiropractors, with only temporary relief. The usual diagnosis was, he said, "catarrh of the stomach." He has become very introspective and recently insomnia has developed.

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*Read before the Washington State Medical Association, Bellingham, Wash., July 26-28, 1910.

Examination. Well developed and fairly well nourished. Physical examination negative except the abdomen. Slight amount of sensitiveness on deep pressure over the appendix. Gastric analysis showed, after Ewald test breakfast, contains 110 cc., total acidity of 35, presence of pepsin and rennin, large amounts of mucus, lactic acid absent. When the patient saw the mucus he said, "Doctor ——— told me that so much mucus always meant catarrh of the stomach and it was very difficult to cure."

Treatment. After carefully considering the anamnesis, I ventured a diagnosis of chronic appendicular disease. Operation revealed a chronically inflamed appendix, three and one-half inches long, bound down retrocecally. Considerable difficulty was experienced in its removal. An uneventful recovery followed. Two months after the operation the patient declared himself free from pain and digestive symptoms. Gastric analysis showed contents 95 cc., acidity 65 and marked diminution of mucus. About six months later the condition was the same. In May of this year in answer to a letter, he says, "I feel first rate. No return of the old trouble. I weigh about 15 lbs. more than I did at the time of my operation."

Gallbladder Disease. It is a well recognized fact that the majority of cases of gallbladder disease give rise to symptoms referable to the stomach and therefore are treated for years as a chronic gastric affection. That gallbladder trouble can and often does give rise to an over-production of mucus, independent of gastritis, is not, I believe, so well recognized, especially by the general practitioner.

The following case is illustrative of this type:

Patient, F. McG., male, age 36, mill hand, consulted me March, 1907.

History. Does not remember having had any acute abdominal attack, attended with fever and confinement in bed of more than 24 hours. No history of typhoid. About two years ago had an attack of "indigestion" necessitating the services of a physician. Was in bed one day. Attack began with severe epigastralgia and vomiting. Thinking he had eaten something which had not agreed with him, he took a mustard emetic. The pain continued and he called a physician who gave him a hypodermic injection which enabled him to sleep fairly well the remainder of the night. Next morning he took castor oil. He felt fairly well all day, but, in accordance with the advice of the physician, ate only broth. The next day he resumed work but felt weak, had anorexia, and some vague abdominal pain. Since that time he has been under the care of a doctor most of the time, suffering, supposedly, with catarrh of the stomach. At least two physicians had confirmed the diagnosis of his family physician. He now complains of distress after eating, sour stomach, anorexia, gastric and intestinal flatulence, occasionally nausea and vomiting lasting from 24 hours to 3 or 4 days, alternating with periods of perfect freedom. He is always constipated.

Physical examination. Well developed and fairly well nourished, negative except the abdomen which presents a marked tenderness over the gallbladder on deep inspiration. On deep pressure over the splenic flexure there is slight tendernesss. Stomach contents 130 cc., pepsin and rennin present, total acidity 30, large amounts of mucus (the contents could be poured in a lump from one beaker to another) lactic acid present.

Two subsequent analyses gave practically the same results.

Treatment. A diagnosis of chronic gallbladder disease was made and laparotomy performed. The gallbladder was chronically inflamed and moderately dilated. Drainage was instituted. Convalescence was uninterrupted and the patient left the hospital on the 28th day after operation.

Postoperative history. After one month of tonic treatment he returned to work. No return of dyspeptic symptoms but troublesome constipation persisted for several months, finally yielding to dietetic and cascara treatment, aided by abdominal massage and hydrotherapy. A little over four months after the operation gastric analysis showed the following: 110 cc., pepsin and rennin present, total acidity 50, absence of lactic acid and very little mucus. Four subsequent analyses gave substantially the same findings. A letter a few weeks ago states that he is entirely well and works hard every day.

Neuroses. Different authors tell us that in gastric neuroses we may get almost any symptom-complex, with predominance of either motor, secretory, or sensory symptoms, but pay very little attention to the mucus content. I feel sure that many cases diagnosed as gastritis are gastric neuroses, although I do not believe that a marked over-production of mucus so often results from neuroses as from appendicitis or gallbladder trouble.

The following case is one of the most instructive I have ever handled:

Patient, J. L., male, age 54, farmer, consulted me in December, 1905.

History. Says that he has always had a "weak stomach" and for the last seven years it has bothered him more than before causing him to treat with numerous doctors and to take many patent medicines which in the beginning usually relieved him greatly.

Dr. Frederick Clift, Farmington: I fully agree with the idea that we had cases of malaria in Utah fifteen to nineteen years ago. In St. George, which is about 45 miles from the River Virgin, I believe there is not a case, but within six miles of Washington there is a hotbed of malaria. It is contiguous to the Rio Virgin. Men in St. George go down into the Washington field to work, and that is where they get their malaria. I advised them to stay away from that field and while they did so they had no malaria. We must remember that we are trying to regulate our dry climate in Utah, especially in the northern counties. We are plentifully sprinkling our lawns with water and I believe that we are in that way manufacturing mosquitoes. I know places in Provo where we were never troubled with mosquitoes until we began to water the lawns and kept the water running. The more we watered the greater the number of mosquitoes.

Dr. C. E. Edson, Denver, Col: I think Dr. Clark's proof of the presence of anopheles is of great importance biologically, not only to your community here, but to all of us in this inland region. It has been claimed persistently that we had no anopheles, and not having them, we could not have malaria. Some of the older gentlemen here have said for many years they have been seeing malaria. It is a pretty good proof that a good clinical observation is just as good as a laboratory observation. Now that we have anopheles, if they can grow at this altitude it is a new fact biologically, and we must have female anopheles. If I am correct it is the female which is the bloodsucker and, therefore, if you want to find the cause you must lay for her. There is no cause why the anopheles should limit itself to this valley or certain sections of this state. We may have it in surrounding states. So far we have always claimed that there were none in Colorado. In any case we have had no malaria, and in fifteen years' practice there the only cases I have known of have all been in persons coming from malarial districts. If it be true, we should take pains that patients coming from the malarial districts and developing malaria, be surrounded with mosquito netting, so that mosquitoes living here may not be infected with malaria. It has been said that anopheles could not survive in this altitude. If that be true that it can, why would not some of the other parasitic diseases that are not supposed to exist here become acclimated.

Dr. E. W. Whitney, Salt Lake City: May I occupy a few minutes on the consideration of another subject of disease? It is with reference to the rat. I understood that the common gray rat did not exist in this altitude. I always considered it a great blessing for Utah that it was free from rats. They tell me they are here in numbers. I began to think of the consequences, and inquired where the rats came from. I was told that about two years ago a load of hides came from San Francisco and that about two hundred jumped out of that carload of hides. They said we have them coming here in carloads of beer, in the straw. Some four of five months ago Dr. Beatty came out with an article which some of us saw, speaking of the danger of introducing the plague bacillus. If we have rats here from California we are in danger at most any time to have an infection of the plague and I think this society ought to go on record as recognizing the presence of rats. As a matter of ordinary common business sense we ought to have a crusade against these rats, which are mostly in the southwestern portion of the town.

IMBALANCE OF OCULAR MUSCLES.*

By A. H. Sawins, M. D.

SPOKANE, WASH.

It is with timidity as well as pleasure that I come before this body of fellow practitioners with a subject so worthy of discussion as the eyes, and should I succeed in provoking the interest of the association in one cardinal feature of this subject, namely, the influence of vision on the conduct of the muscles in squint, I shall feel that I have well employed my time.

The extra-ocular muscles play a much less important part in the deviation of visual axes than was formerly supposed. We must, therefore, look deeper than the muscles for the origin of strabismus. Very rarely some anatomic defect, or mal-attachment of a muscle, may exist. But generally all deviations, from the slightest muscular insufficiency to extreme cases of heterotropia, may be traced to some form of amblyopia. The medical profession is now pretty well agreed that 90 per cent. of all strabismus is caused by amblyopia.

A most natural question then is, "What is the cause of amblyopia?" And the best answer I can give to this question would be, "Retarded development of the retina or other tissues of the visual apparatus." How often this retarded development is due to disease, how often to deformity, and how often to accident we may not say. It is reasonable, also, in the light of our present knowledge, to conclude that a simple operation upon the muscles of a highly amblyopic eye will not cure the squint, unless we can devise some means by which to develop the brain cells, or the retina upon which the squint depends, for the visual axis of a highly amblyopic eye is almost certain to again wander away from that of its fellow, no matter how skillful the operation.

Furthermore, we are compelled to look upon all forms of heterophoria and heterotropia merely as symptoms of some underlying conditions which may be corrected only by correcting these conditions. It must be admitted, however, that long enforced false stimulation of a muscle may establish in it an excess of action, or an enfeeblement of the same, which will in time cause it to maintain an abnormal position of the eye-ball, but this does not place the primary cause in the muscles.

The smaller degrees of muscular imbalance—those in which the deviation is not sufficiently marked to designate them as squint—are the ones which cause the patient the greatest inconvenience, while, on the other hand, in squinting eyes the deviation of the visual axes is so great that the patient does not see double, and if the vision be good even in one eye, which is usually the case, he suffers no inconvenience, excepting from the consciousness of his personal appearance. Strabismus is not noticeable, as a rule, before the second or third year of life, and often appears much later than this, especially when it develops from the slighter deviations.

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*Read before the Twenty-first Annual Meeting of the Washington State Medical Association, Bellingham, Wash., July 26-28, 1910.

While a babe may be born with anatomic defects of the eyes, as it may be born with defects of other members of its body, it cannot be said to have a manifest heterotropia at birth. Since all babes are born blind, or perhaps it would seem more charitable to say, since vision is always developed after birth, it would be folly to affirm that a child was born with squint, when there were, as yet, no visual axes.

While the eyes of a new-born babe may be, and doubtless are, responsive in some way to light, it is some months before the retinas develop sufficiently to take any account of objects. Little by little objects of a bright nature begin to stimulate the optic nerve, little by little the visual axes are established, gradually the retina takes the objective image, and gradually the brain begins to recognize and to distinguish one object from another. If now the nerve centers and the retinas of the two eyes have kept pace with each other in their development, a correct visual axis will be established and the child will have perfect coordination of accommodation and convergence and binocular vision. If, however, any portion of the visual apparatus fails to keep up a proper developmental balance, the result would most likely manifest itself in some form of heterophoria or heterotropia.

It is a question how often this disturbance in the development is due to disease or injury, and how often to deformity. Personally I incline to the belief that ninety-nine cases in a hundred are due either to disease or injury. The disease may be tubercular, luetic, or zymotic. The injury may result from the accoucheur's forceps, a bump of the head, severe fright or even a strong irritating light, any one of which may cause sufficient injury to the delicate tissues to retard their development.

Having thus briefly glanced at the causes of what is commonly termed muscular imbalance let us now consider for a moment the management of these conditions.

While heterophoria, or even heterotropia, seldom sends a child to the blind asylum, it is nevertheless a serious impediment for one to go through life with crooked eyes and partial vision. If one expects to do business with the world today he must be able to look it squarely in the face with both eyes. It is, therefore, our duty as physicians to see to it that every little new-comer whom we usher into this world has a good visual start, that he may see well to walk uprightly and view things as with a single eye.

As soon, therefore, as the baby has developed sufficient vision to follow with its eyes the light of a candle we should examine the eyes for muscular balance and visual acuity. This is a simple matter, and may be done by the physician himself, or by an intelligent nurse.

A lighted candle should be held in front of the babe, not too closely, however, but one metre from its eyes, and when the babe has fixed the blaze with his eyes the candle should be moved in a circle. Note if the eyes follow it; if so, the circle should be gradually widened until the baby is compelled to move its head in order to follow the light. This is good exercise, as well as great fun for the little one, and during its performance the physician should observe if both eyes are following the light throughout its entire excursion. If so, there is pretty apt to be good binocular vision and concomitant action of the muscles. The image of the candle upon a corresponding or different portion of the two corneas will enable him to determine whether one or both eyes fix and follow the candle. The room should be slightly darkened by drawing the shades.

If the retina or the brain of the little one are not sufficiently developed to take cognizance of the light and follow it with the eyes, we must wait for further development. The time will, of course, vary even in apparently normal babies, from a few weeks to many months. Should it be found that either eye does not fix the light and follow it with its fellow, we should at once proceed to develop the retina and stimulate the muscles in the weaker eye.

It is a basic principle that we cannot have good binocular vision and convergence without equal, or nearly equal acuity of vision in the two eyes. This is why skillful refraction and wearing of the true correction is of such great help in correcting these cases. It is well known today that a blind eye, or one nearly blind, is almost certain to wander away from the visual axis of its fellow. This is an important point to always bear in mind in operating on the extra-ocular muscles.

The fundamental treatment, therefore, is to bring the vision of the two eyes, as nearly as possible, to the same acuity. This treatment should be commenced at a very early age, as soon, in fact, as it can be demonstrated that a defect exists. If the child be too young to wear glasses, and too young for the safe use of atropin, the good eye should be hoodwinked for several hours each day, with some mechanical device which will not produce pressure upon the eye-ball, and at the same time one which the babe cannot easily remove. In this manner the good eye will be put out of commission and the child com-concentrated dose; therefore, avoid concentration during administration. The concentration is greater at sea-level than in high altitudes, because of atmospheric pressure; in other words, a given cube will contain more particles of vapor at a lower than at a higher altitude. Therefore, the administration of chloroform is safer when given in high altitudes than at sea leved.

Reflex and Paralytic Dilatation of the Pupils. The pupils should be contracted during surgical anesthesia (3rd stage). There is, however, a condition known as "chloroform sleep," or false anesthesia, in which the pupil is minutely contracted (1 mm.), yet the patient is not in the third stage. This is frequently seen in infants and children during anesthetization. The anesthetist should know whether the dilated pupil is of reflex or paralytic origin. If reflexly dilated the patient is perhaps not deep enough and if there be paralytic dilatation the narcosis is dangerous. The differential diagnosis is given in the following table:

Reflex Dilatation.	Paralytic Dilatation.
Pupil is bright, mobile liquid, life-like hue.	Pupil is dull, sluggish, immobile; death-like condition.
Other reflexes usually present.	No reflexes of any sort present.
Patient shows signs of 'coming out."	Entire body is relaxed.
Marginal motility of the iris is present.	No marginal motility is present.
Eyeballs may roll.	Eyeballs are fixed.
Reaction of pupil to light.	No reaction of pupil to light.
Not enough anesthetic has been given, determined by clinical experience.	Too much anesthetic has been given or not enough, resulting in reflex cardiac inhibition.
Respiration and circulation in fair condition.	Respiration and circulation failing.
Skin has good color.	Skin is cold and clammy; pallor or lividity.
Eyelids do not separate.	Eyelids remain partly open, due to relaxation.
Tonicity of eyelids is present.	No tonicity of eyelids.
Tears are not markedly secreted.	Increased secretion of tears.
More anesthetic will contract the pupil (third stage.)	More anesthetic will produce still wider dilatation, plus respiratory and cardiac arrest.
Less anesthetic will cause pupil to remain large (reflex pupil).	Less anesthetic or none will cause the pupil to contract back to the third stage.

MALARIA IN UTAH.*

By C. M. Clark, M. D.

PROVO, UTAH.

It has been a disputed question for years as to whether or not malaria existed in Utah. It is an undisputed fact that cases come into this state from California and the Southern States, but it is claimed that it could not originate here, as the high altitude and mountainous district could not support the malarial bearing mosquito, and that the anopheles does not exist in Utah.

Within the last ten years I have had abundant opportunity to see and examine many cases of malaria, in all its stages, that originated in Washington County. Along the Rio Virgin River, from Bunkerville, Nevada, to Rockville, Utah, we may find many cases of the disease. In the little town of Washington, near St. George, Utah, this is the most common complaint. It has existed in Southern Utah ever since the country was settled.

I have never made a search for the anopheles mosquito in Washington County, but rested content, as did other medical men, with the assurance that this county must be a natural habitat of the little pest. I always took it for granted that malaria existed in Utah County, as the locality is an ideal place for the propagation of the mosquito. The marshy lands, springs and standing pools near Utah Lake are certainly ideal breeding places for them. No one will dispute this after once taking a drive through this locality on a warm July evening.

The derision I had to bear after diagnosing my first case of malaria stimulated me on to a thorough investigation for the existence of the anopheles mosquito and I found them to be plentiful. From a standing pool on Provo Bench I collected the eggs, larvae, pupae and adult mosquitoes, and after a thorough study found the anopheles, some specimens of which I sent to the state bacteriologist, who confirmed my statements.

The following are several cases that originated in Utah County:

Case 1. M. H., aged nine years, born in Tintic district, lived in Salt Lake City for several years and moved to Provo with her parents last April. She has never been out of the three counties. She has always been a robust and healthy child. On September 1 she complained of being tired and had headache; these symptoms persisted in a gradually increasing form for seven days, when she had a chill which lasted about half an hour; this was followed by a rise in temperature. The same symptoms followed the next day and I was called to see the child. I found the temperature 102 degrees, tongue clean, lungs clear, no abdominal tenderness. Child seemed bright and not very sick. I made a provisional diagnosis of la grippe and called early the next morning to find the child up and temperature normal. I saw her no more that day, but the mother said the same symptoms returned.

On the next day, the 11th, I was called at 2 p. m. and found the temperature 104 4-5 degrees, pulse

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*Read before the Sixteenth Annual Meeting of the Utah State Medical Association, Salt Lake City, Utah, Oct. 3-4, 1910.

160. Child was still bright and not apparently very ill. I immediately examined the blood for the malarial plasmodium and found it. She had the double tertian infection, causing a chill every day. I prescribed specific treatment and the symptom-complex yielded at once. The temperature remained normal all day on the 12th, and has remained so to date.

Monday morning, the 12th, I spoke of my case to several of the local doctors here and they said I was surely mistaken in my diagnosis, as there was absolutely no malaria in the state. I made a blood examination every two hours all day and invited most of the doctors to see them. They all agreed that I was right in my diagnosis, but where did she get it? The father of the little girl worked in Texas for the last six months and came home to visit the family on August 1. Most of the doctors immediately came to the conclusion that the father brought an infected anopheles in his suit case and it got loose and bit the child—rather far-fetched.

Case 2. While one of the doctors was examining my specimen he spoke of one of his cases that was running a very peculiar temperature. We decided to examine the blood for the malaria germ and found it. I again invited the doctors to see these specimens and told them I would guarantee that this man was not bitten by the Texas mosquito. They all agreed for the second time that this was malaria, but where did he get it? He was born on Provo Bench, is a fruit grower, and school teacher. He has not been out of the county for years, neither has he had visitors who could bring in a mosquito to bite him.

Case 3. This man's little eight-year-old boy complained of being cold and had a fever every other day. I examined his blood and found the malarial parasite in abundance. Both of these cases yielded to specific treatment readily. A young man of Vinyard said he had "chills and fever" and cured himself with quinine and whiskey.

Cases 4 and 5. C. Mc. had a chill followed by high fever and copious sweating one day and his wife was attacked with the same symptoms the next. I made blood examinations and found the malarial plasmodium in both cases. These two cases had not been out of the state for a year. They were surely inoculated at home.

Case 6. This has been a puzzle. M. B., five years old, has suffered for ten months with a continuous fever. She has been treated for walking typhoid, rheumatics and liver trouble. At times she would sleep almost continuously for forty-eight hours. I made seven blood tests for the malarial organism and found it. The child is suffering from the aestive-autumnal form of malaria.

Case 7. V. B., a strong man of thirty-five, had a chill, fever and sweat on September 1. He felt weak, had headache for a day or two and felt well until October 11th, when the same symptoms returned. I made a blood examination and found the malarial parasite. We may have reports of many cases at our next convention.

DISCUSSION.

Dr. H. G. Merrill, Provo: It has been believed by the medical profession in general that we have not malaria in our midst, because it is too cold for the anopheles variety to live here. This microscopic demonstration of the specimen is a very important step and is convincing. There was no question in the minds of those who saw it, but what he had, as he puts it, the real thing. I was ill seventeen years ago at the little town of Spring Lake, the other side of Payson, when my symptoms were characteristically those of malaria. It was generally understood that there are a great many mosquitoes in that region. There was a lake just back of the farm where I was working and a great many people had chills and fever. I am convinced that I had malaria at that time. I know there are a great many who are thoroughly convinced that malaria does exist in the state, but those who are not so convinced I should like to have examine the specimens that Dr. Clark collected.

Dr. Union Worthington, Salt Lake: I want to add my experience in confirmation of the existence of the malaria mosquito in Salt Lake County. Since having charge of the work in this country in connection with the Garfield Smelter and the Utah Copper Company, located at Garfield, we have had not less than fifteen or twenty cases of unquestionable malaria, the symptoms all being typical of the condition, and the microscopic findings confirmatory. I am certain and positive that no one who has had experience with treating malaria could possibly have seen these cases and heard the histories as given by the patients, and followed up the treatment as laid down in our textbooks, and doubt the existence of the condition in this county. I feel just as positive about it as I do that we have typhoid fever.

Dr. Pike, St. George: The statements we have heard bears out the contention I have held for over thirty years of the existence of malaria in Utah. I saw the first cases in this city some forty years ago, and my old professor who had had something like fifty years of practice, largely in a malarial country, recognized them as sporadic cases of chills and fever. I remember, too, while a student, the breaking up of lands in the West Jordan district, where we had malaria in all its various forms. My own experience was a personal one at first. In New York, while a student in the university, I contracted malaria and had the regular chills and fever. I placed myself in the hands of Professor Loomis, who told me I had a big dose of malaria. When I came back to Utah to practise and located in Utah County, about the first thing that I came up against was a case of malarial fever. I treated it for some time with no success, the patient getting gradually worse. I came to Salt Lake and consulted with the older members of the profession here and they all said, "treat it for typhoid." There was something about it that struck me as not being typhoid, and I made up my mind it was malaria. I commenced treating it for that, and it promptly recovered. Since that time I have treated it in all of its forms along the shores of Utah Lake and also in the Dixie country. People had it who had lived their lives in that county and had never been out of it.

Sometimes he would think himself cured but soon he relapsed into the previous condition. He complained principally of anorexia, nausea, loss of strength and weight, distress after eating and constipation. No acute abdominal attack. On minute inquiry, I found that for the last six years he had had a great deal of trouble with his wife, a very neurotic, mentally inferior woman, twenty-two years his junior. About six months previously his wife had left home taking their only child and he had not been able to locate them. Since their departure he has slept very poorly and ate very little. Sometimes his bowels did not move for four days. He now weighs about 40 lbs. less than a year ago. About six weeks prior to his consulting me a physician, after gastric analysis, had told him that he probably had cancer of the stomach.

Examination. Fairly well developed but poorly nourished. Skin was dry and wrinkled, showing a marked loss of weight. Physical examination was negative except exaggeration of reflexes and shifting abdominal tenderness. Stomach practically in normal position and of normal size. Gastric analysis: 150 cc., poor chymification, marked overabundance of mucus, no free HCl, combined acidity 15, slight amount of lactic acid. Bowels were regulated with fluid extract of rhamnus purshiana. Four days later gastric analysis showed contents 140 cc., no free HCl, combined acidity 18, absence of lactic acid, mucus content same as previous examination. Six days later another analysis gave practically the same findings.

Treatment. I was unable to make a satisfactory diagnosis but believing that a marked neurotic element was present and that optimism is the most important single therapeutic agent at a physician's command, I told him that his entire trouble was dependent upon his reduced nervous condition. I gave him a long talk on the advantage of a man's being rid of an unappreciative wife and the duty he owed to himself and his blood relatives to demonstrate that he was made of too good material to be so upset by such an insignificant incident. In addition to psychotherapy, my treatment consisted in regulation of the habits and diet, cascara for the constipation, a ferruginous tonic, massage and hydrotherapy. The improvement was more marked than I have ever observed in a person who was so obviously sick. In three months he declared himself practically well but was still quite nervous. I purposely postponed examining the stomach contents until six months after the beginning of treatment. This showed 110 cc., good chymification, very little mucus, total acidity 40, no lactic acid.

Subsequent history. After six months he was discharged cured. I met him very often and made it a point to tell him how well he looked. He consulted me twice afterward, complaining of "a feeling as though the original trouble were coming back." After a complete examination I reassured him and told him that one dose of medicine, a saline laxative, would straighten him out. In July, 1908, he was in perfect health, working hard, and weighed over 30 lbs. more than at the time he first consulted me. This was undoubtedly a neurosis which closely simulated gastric catarrh, or possibly a beginning carcinoma.

Summary and Conclusions. (1) One must be careful to exclude the mucus originating from the esophagus and buccal cavity. (2) An over-production of mucus in the stomach by no means always indicates chronic gastritis. On account of the diagnostic weight usually given mucus in the test meal, chronic gastritis is often diagnosticated, but relatively rarely demonstrable. (3) The diagnosis of chronic gastritis must be made from a careful study of anamnesis, physical examination and repeated gastric analyses, not attaching undue importance to the mucus content. (4) An over-abundance of mucus in the test meal is often a reflex phenomenon, dependent upon gallbladder disease, appendicitis or a neurosis. (5) From the diagnostic, as well as the therapeutic point of view, one should remember that most gastric dyspepsias have a marked neurotic element.

HELPFUL POINTS IN ANESTHESIA.

By Carl G. Parsons, M. D.,
DENVER, COL.
Lecturer on Anesthetics, Denver & Cross College of Medicine, University of Denver.

Anesthesia at the present time is upon a high plane and deservedly so, because it is one of the most important branches of surgery. In order to obtain the best results it is imperative that the administrator be in constant practice (a specialist). It embraces the subjects of general medicine and general surgery, and he or she who wishes to excel in the art must know particularly anatomy and histology, physiology and pathology. The production of anesthesia is the production of physiologic coma. This is a condition bordering on death, so, naturally, when physiologic coma is to be produced it is well that the one producing it be a person fitted and trained for that particular mission.

Nearly all anesthetics should be given by a trained anesthetist for a number of obvious reasons. Every large city should have several anesthetists who confine their practice entirely to anesthetics. It is a specialty in itself. One cannot expect to succeed in this branch of surgery unless he limits his practice to that particular subject. We predict that within ten or twenty years from now no surgeon will undertake to operate upon a case (except in rare instances) without the assistance of a trained anesthetist. It is impossible to go into all phases of the subject of anesthesia in a paper of this sort, therefore I will present only a few practical points which have been thoroughly established in the last few years.

Anesthetic Accommodation. Gradual, continuous administration, with equal drug distribution is an important principle in anesthetization. These few words explain themselves. Anesthetics should never be "crowded." The words, "push the anesthetic," should be stricken from surgical colloquialism.

To further explain the above principle, I wish to quote from an article written by me, which appeared in the *Denver Medical Times and Utah Medical Journal,* for April, 1908: "Henry M. Lyman, of Chicago, in 1881 wrote a most excellent book entitled 'Artificial Anesthesia and Anesthetics.' On page 31, in regard to the method of producing anesthesia, is this sentence: 'There is, on the part of the living units which compose the animal body, a power of gradual self-adjustment to altered conditions of existence.' There is no need of a lengthy article to explain this truth. It applies to all general anesthetics, be they ether, chloroform, ethyl chloride, or others, and simply means that the induction of anesthesia is to be produced gradually. This law, inter alia, has to do with vapor percentages. What is an excess of vapor for one individual is a very mild one for another.

During the induction of anesthesia, if the administration be conducted gradually and uniformly, with a proper admixture of air (with its 23 parts of oxygen), the following will result: The anesthetic will be safer; syncopal attacks are minimized, especially when using chloroform, as the vapor is not concentrated; the patient is able to breathe during the first stage without a feeling of irritation or suffocation, which may lead to choking or vomiting; in reality quicker time is made in getting a patient to the third or surgical stage than when the anesthetic is crowded; the second, or stage of excitement is absent, except perhaps in very muscular or alcoholic subjects; it does away with the asphyxial element of ether; the administrator has his patient under better control, i. e., he is better able to know his subject's narcotic susceptibility; there is a uniform anesthesia; there is no appreciable fluctuation in the percentage of vapor inhaled, but a gradual scientific anesthetic state brought about which permits of a deeper and more satisfactory narcosis, with a very small amount of drug being used."

Drop Method of Ether. The real ideal drop method of giving ether has not yet come into general use. This may seem a broad statement, but nevertheless it is a fact. Many persons think they are giving ether by the drop method, when in reality they are giving the drachm method or stream method, plus an impeded air-way. Where an excessive number of layers of gauze or stockinette cover the mask, and superposed upon this is a large thick towel, or there is wrapped about the mask a large thick and long roller gauze, often obscuring the entire head of the patient, and ether is administered in a stream or given in spurts of a drachm at a time, such certainly is not ether by the drop method.

The drop method of administering ether means exactly what it says and, given correctly, gives results with a minimum amount of drug. With all inhalation anesthetics it is of prime importance that the vapor should be inhaled and exhaled with the least possible resistance consistent with certain necessary vapor percentages.

The real drop method is simplicity in itself. A wire mask is covered with sixteen layers of No. 2 gauze, leaving a margin of one inch projecting beyond the base of the mask (this margin to rest on the patient's face). As advised by Sternberg, of Portland (Technique in General Anesthesia, *N. Y. Med. Jour.,* Aug. 13, 1904), the vapor should be given at first in dilute form until the mucous membrane of the respiratory tract becomes accustomed to the irritating fumes. This is done by the mask being held a few inches from the patient's face and gradually lowered. The ether should fall from a proper dropper, one which will always give a large and uniform drop. Saturation with ether of the summit of the mask about two inches in diameter at first and later about one inch will put under and keep under the average patient, and it will take but a few drops to produce this above mentioned saturation. The patient should breathe naturally, for the inhalation of ether will in a few moments after starting regulate its own and proper amplitude of breathing. The correct administration of ether by the drop method is a rather difficult system, and considerable study and practice is necessary to obtain first class results.

Chloroform. Chloroform has, in recent years, unjustly received a set-back in favor of ether. Nevertheless, it is an excellent anesthetic agent. Deaths from chloroform usually occur on the table while the patient is directly under its influence. Ether gives its gravest troubles after anesthetization. There are many deaths which occur after operation due directly to the effects of ether. The point to bear in mind is this, that all anesthetics are good if discrimination is used in their administration. It is true that chloroform as ordinarily administered by all sorts of methods, crude and otherwise, and by many inexperienced persons, is five times more dangerous than ether given in the same way. Expert anesthetizers very seldom have untoward results in giving this potent drug.

Chloroform should be given drop by drop only, and with a generous admixture of air, with a mask covered with eight layers of No. 2 gauze. In mouth and throat surgery administer it by the vapor method, i. e., with a Junker's inhaler with air bulb or compressed oxygen. An over-dose of chloroform is a pelled to use the bad one until its retina develops an acuity of vision equal to that of the good eye. By thus retarding the development of the better eye, and stimulating the development of the poorer one the child will be able to focus alike with both eyes. If there be a considerable error of refraction, or an anatomic defect of the eye we, of course, will not hope for results by this treatment.

When the child is older we may accomplish much by a wise and judicious use of cycloplegics. The action of both ciliary muscles should be completely suspended and the latent refractive error determined by one skilled in retinoscopy, and if the error warrants glasses they should be prescribed for the full amount of the latent error. Generally this is all that is required to cure a squint, but it sometimes requires further treatment, and the cycloplegic must then be kept up for a longer period, sometimes in the good eye only, sometimes in both. If, for any reason, atropin is not desirable, after the glasses have been adjusted a piece of paper may be pasted on the lens in front of the good eye, or a ground glass lens may be used for several hours each day until the two eyes are brought into harmony with each other. If sufficiently good vision be present in both eyes some benefit may result from the well known muscular training.

Prisms should almost never be prescribed to correct a squint or a muscular insufficiency. They may, however, be used to advantage in the various muscle exercises.

When the case does not present itself until the child is well advanced in years, or until after maturity, the management is then somewhat different, if not difficult. Here the milder forms, muscular insufficiency, may be entirely overcome by putting the ciliary muscles completely at rest, refracting, and adjusting the true correction.

In cases of squint in older children we are not always so fortunate, for here the same condition prevails, without the hope of developing the vision in the amblyopic eye, and in a certain class of cases we may be able only to bring the visual axes of the two eyes just close enough together to cause the patient to see double, and this diplopia, together with the eye strain resulting from an effort at binocular single vision, causes him all kinds of trouble, whereas before he was entirely comfortable. Operation, then, is the only procedure.

While tenotomy is a very simple operation, and advancement requires but a little more dexterity, it sometimes requires good judgment and a careful examination, not only to determine the strength of the muscles, but also the strength of vision, to know just when to and when not to operate.

Besides operating upon the muscles of blind eyes and paralyzed muscles, for cosmetic effect, we have a class of squint cases, where one eye is highly amblyopic, that are difficult to manage. They are easily corrected, or the operation has but little effect. Notwithstanding the fact that we use supporting and counteracting sutures, and by a correct operation bring the visual axes of the two eyes into harmony with each other, they will not so remain, for they seem willing to stay anywhere but in the right place. The fault is not in the muscles, but in the lack of visual power in the squinting eye. And this is the objective point which I have endeavored to bring out.

TUBERCULAR MENINGITIS.*

By J. H. Bristow, M. D.,

PORTLAND, ORE.

This paper is intended to set forth briefly a practical consideration of tubercular meningitis. The thoughts contained are largely the result of twenty cases of this disease seen by the writer in private practice. All of these were children over eighteen months and under ten years old. Tubercular meningitis should be a matter of great interest because of its pathology, its subtle and interesting symptomatology and its invariably fatal termination.

In order to introduce the subject the histories of two cases will be briefly related. These are the last of the series of twenty and both are entirely typical of the disease being discussed.

Case 19. A boy one year old. He was gradually overcome by what seemed to be a mild gastritis, i. e. for a period extending over about three weeks he was afflicted by occasional vomiting, loss of appetite, irritability, indifferent sleep, inattention to play, a tendency to emaciation and increasing paleness. The bowels showed little or no disturbance unless it was a tendency to constipation. An early diagnosis was gastroenteritis.

When the disease was fully developed the patient lay quietly in the bed with little if any sort of muscular movement. When any part was moved it was with a slow uncertain gesture or else in a trembling, jerky and ineffectual manner. The skin was pale, except that a close inspection revealed a delicate flush. Emaciation considerable, head retracted little if any, abdomen not markedly scaphoid. Vision was lost and there was disturbance of the eye muscles, pupils dilated and not responsive to light. The patient was in the third stage of tubercular meningitis. Death occurred during the first convulsion.

Case 20. This case was so nearly like the preceding that only points of difference need be described. They are that case 20 had no disturbance of the pupils or eye muscles, the abdomen was not markedly scaphoid but there was very marked stiffness of back and neck muscles. My predecessor in this case made a diagnosis of gastroenteritis and was discharged because the patient failed to improve. I was in turn discharged because I offered a fatal prognosis. My successor treated the case for about two weeks, performed an autopsy, confined the search to the abdomen and gave a negative report.

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*Read before the Portland City and County Medical Society, Portland, Ore., Oct. 5, 1910.

The prognosis in tubercular meningitis is bad at all times for the cases that have recovered are so few that they are looked upon as a matter of curious interest.

Etiology should be the matter of prime interest for, if we ever successfully cope with this disease, it must be by a complete understanding of this factor.

Heredity seems to be a real cause of tubercular meningitis. Furthermore, hereditary seems to work in a curious way. In twelve of my cases there is a history of one of the parents having had an attack of chronic cough at some time in his life, who ultimately recovered. It is claimed that a parent that is afflicted with an active phthisis of a florid type is not apt to have offspring with meningeal infection, but rather will there be a pulmonary type of so-called heredity. Meningeal infections are frequently to be found preceded by a parentage that has a healed pulmonary tuberculosis. The experience in my cases bears out that idea in a striking manner. In making up the history of a suspected case the parental histories should be enquired into most carefully.

It is stated that tubercular meningeal infection never occurs except as a secondary infection, a primary focus always being present in some other tissue. It is also affirmed that at autopsy the primary focus is not always discernible. In my opinion direct infection of the meninges does undoubtedly occur. That being the case, the prodromal symptoms, such as occur some days or weeks before any definite signs develop, belong properly to the stage of irritation and are due to the fact that infection has begun, probably in the vessels at the base. This I believe, rather than the idea that in all cases prodromal symptoms are due to a primary focus in other tissues.

One of my cases was beginning the prodromal symptoms at the time her mother died with consumption. The mother was sick two years, while the patient was three years old. For months she had been shut up in a farm house with the sick mother. Another four-year-old girl inhabited the same room with her grandfather, he being tubercular, and she was in the habit of drinking from the same cup the milk that was left over after the grandfather had drank. Both died. The girl was ill for six weeks with meningitis.

Reich reports ten cases in the practice of a midwife, all occurring in about a year. The midwife had pulmonary tuberculosis and was in the habit of respiring into the mouth of the newborn in order to resuscitate. She was also much given to kissing the babies. It is my belief that in all these cases the first and probably only infection was in the head.

The manner of infection is plentifully argued above. How did it enter? Probably by inhalation and then through the cribriform plate of the ethmoid or else through the tonsillar structure and thence through the blood stream. Or perhaps an infection of the bronchial gland, that is conveyed to the meninges later through the blood stream.

Osler, Koplik and Schlossman all point to the fact that at autopsy the greatest amount of tubercles are found along the vessels at the base and it is their deduction that the infection occurs through the blood stream and begins first about the inner coats of the vessels, passing thence outward to the surrounding tissues. One of my cases had had an operation for the removal of adenoids and tonsils. A fatal prognosis was offered about ten days after the operation and about two weeks before the patient died. Undoubtedly a dormant disease was made active in this case or else a very lively primary condition occurred. It is my belief that infection of the meninges was set up through the blood stream by operating upon a condition in the throat that was already tubercular.

The ordinary and much operated upon tubercular glands in the neck are said to be a very large and real source of danger if operated upon. Statistics are offered to show that such operations should not be done, for the reason that the interference is likely to set up an active condition and because of its situation infecting the meninges. The operation has been performed a good many times by the writer with no such results and I have no personal knowledge of any such disaster except the case mentioned above. Yet I am willing to believe that such a thing can very readily happen and I do not advise the operation as often as formerly. In fact, it seems that it is well to avoid it in practically all cases for these matters belong to the internist.

The infectious fevers seem to be a very active cause and it should be duly remembered in the treatment of these diseases. Whooping cough is one of the most active in this class and measles must not be forgotten. Permit me to remark that I do not believe the infectious diseases of childhood always receive the deserved amount of attention. Too many of us to get the impression that when a diagnosis is made and the case reported to the health authorities our duties are ended. Such is not the case by any means, as one may discover by following this class of cases to the end. Whooping cough is declared

ANNUAL MEETING OF THE OREGON ASSOCIATION.

At a meeting of the Board of Councilors of the Oregon State Medical Association, held on Monday evening, the thirteenth of February, plans and a definite date for holding the next meeting were discussed. It was unanimously agreed to have the Oregon State meeting during the week beginning July tenth. It was also decided to omit for the present year all local papers from the program. The secretary was instructed to take up the matter with a number of men, doing special work noted in their lines in the East, and have a series of didactic lectures by specialists; two or more prominent internists; two or more surgeons; two or more alienists, in addition to some men doing original research work in special lines.

It is hoped to make the social feature of this meeting unusually attractive and, as our meeting will follow only a week after the American Medical Association's meeting in Los Angeles, it was thought that perhaps some of the other societies might avail themselves of the opportunity of listening to men whose names have become famous throughout the United States. As it is most probable that many of the physicians who attend the A. M. A. will take the Alaska trip, the Northwest will probably be peculiarly favored this year. C. S. W.

ANNUAL MEETING OF THE WASHINGTON ASSOCIATION.

The committee of arrangements of the Washington Association has set the date for the Spokane meeting for September 5, 6 and 7. Deferring it until fall, instead of assembling immediately after the A. M. A. and Oregon meetings, will prevent the attendance of distinguished physicians from the East who might be available at the earlier date but it will insure a much larger attendance of members from all parts of the state. H. B. L.

THE ANNUAL MEETING OF THE UTAH STATE MEDICAL ASSOCIATION.

The next meeting of the Utah State Medical Association will be held at Salt Lake City, October 4 and 5, 1911. Papers for this meeting are desired from the members. They are requested to send the titles of their papers as soon as possible to Dr. W. Brown Ewing, Secretary, Boston Bldg., Salt Lake City. W. B. E.

REPORTS FROM THE COUNTY SOCIETIES.

For the benefit of the members of different county societies in the states represented by this journal, we take pleasure in publishing such reports as are sent to us by the secretaries of the societies. In order to insure their publication in the following issue they should be received not later than the 25th of each month. It is advsiable that these reports be not too lengthy, but contain the substance of the proceedings of the societies reported. As space for such reports may be limited, the editor reserves the privilege of condensing the reports, if considered too long. In the Directory of Medical Societies it is intended to publish the officers of each society for the current year. Criticism has at times been made that some names are carried for a period after the officers have retired. It is self-evident that the list cannot be kept up-to-date unless changes are promptly reported to the journal and the names of the old officers are necessarily continued until the names of new officers are received. C. A. S.

MEDICAL NOTES

OREGON.

The State Board of Medical Examiners, at their recent semi-annual meeting, granted to 45 applicants licenses to practice medicine in this state. There was a total of 85 who took the examination.

Dr. W. G. Coe, of Pendleton, formerly a state senator, has started on a tour of the country, which will finally end in his going to Germany for a postgraduate course. The length of his stay is indefinite, but he expects finally to return to Oregon.

Dr. E. B. McDaniel, of Portland, has been appointed chief surgeon of Spokane, Portland & Seattle Railroad Company, Astoria & Columbia River Railroad Company, Oregon Electric Railway Company, in place of Dr. E. F. Tucker, resigned.

Dr. F. S. Sandborg has opened offices in Bend. He has practised for four years in Bellingham, Wash.

WASHINGTON.

Changes in the Seattle Health Department. Dr. F. S. Bourns resigned from his position as chief medical inspector and Dr. H. J. Davidson from his position as one of the school physicians. Dr. C. F. Davidson was appointed to fill the vacancy left by Dr. Bourns. Dr. W. C. Woodward took Dr. C. F. Davidson's position as physician to the outpatient department at the city hospital. Dr. E. A. Layton takes the position left vacant by Dr. H. J. Davidson.

Scarlet Fever Quarantine Lifted. The Hospital for the Feeble Minded, at Medical Lake, Spokane, has been released from quarantine from the scarlet fever epidemic which has kept it closed for some weeks. About 30 cases had appeared during this time, but none were of a serious nature.

Local Sanitation is a topic of very general interest in North Yakima at present. A paper was presented by Dr. A. J. Lynch at a recent meeting of the Yakima County Medical Society dealing with the subject in detail, and the various aspects of the problem are to be taken up at future meetings. The county physician, Dr. Frank, in his annual report, made a number of pertinent recommendations on health matters in general, and typhoid fever in particular.

Municipal Tent Colony for Tuberculosis. Spokane has decided to make provision for the care of indigent tuberculosis patients who, on account of short residence in the city, are not eligible for care in the county hospital. The city officials recognize that these tuberculosis patients are a menace to the public health, and have taken steps to obtain a five acre tract near the present Isolation Hospital, where these unfortunates may be cared for. The City Council, the Health Department and the Bureau of Associated Charities are co-operating in this matter, and their efforts will doubtless result in the establishment of this much-needed institution.

The Smallpox Situation in Washington and British Columbia is being very efficiently handled by the state and provincial boards of health. Quarantine is being enforced with discrimination, and every effort is being made to avoid the injustice to uninfected persons which so usually attends quarantine regulations. Weekly reports have been asked for by the State Board of Health from the county health officers for exchange with those obtained by the Provincial Board of Health. Thus is avoided not only unjust discrimination against towns, but also a general quarantine along the international border. Vaccine has been furnished free to those who cannot afford to pay for it by the State Board of Health, and is being effectively used.

County Physicians' Duties Increased. Spokane County has renewed its contract with Dr. W. Q. Webb as county physician, with the additional proviso that he shall, upon call, attend all insanity hearings in the Superior Court without additional compensation. This applies also to his new assistant, Dr. R. J. Newell. This new proviso will result in a saving to the county of from $100 to $150 a month, but, as so often happens in such cases, it may soon result in the loss to the county of the services of an able medical man.

Essays on Tuberculosis. Prizes have been awarded for the best essays on the subject of "Tuberculosis; Its Causes and Prevention," by the city health officer of Walla Walla. The competition was open to the school children of the grades and awakened keen interest. Two of the winners were from the eighth grade, two from the seventh and one from the sixth.

Lewis County Medical Society, at the January meeting of the society, held at Chehalis, elected the following officers for 1911. President, R. B. L. Banks, Centralia; vice-president, J. G. Coleman, Chehalis; secretary-treasurer, W. B. Hotchkiss, Chehalis; delegate to State Association, R. B. L. Banks.

The Skagit County Medical Society. At the annual meeting of the Skagit County Medical Society the following officers were elected for the ensuing year: President, J. F. Osterman, Mt. Vernon; vice-president, J. F. Mills, Sedro-Woolley; secretary and treasurer, W. N. Hunt, Burlington; board of censors, C. C. Harbaugh of Sedro-Wooley, H. E. Cleveland of Burlington and W. Appleby of Anacortes; delegate to State Association, George B. Smith, Anacortes; alternate, M. B. Mattice, Sedro-Woolley.

Dr. and Wife Injured. Dr and Mrs. E. C. Wheeler, of Tacoma, were injured when two automobiles collided on January 25. The doctor sustained a compound fracture of the right leg and a badly sprained left ankle. Mrs. Wheeler's left arm was broken.

Dr. J. D. Thompson has moved from Winlock to take up practice in Malden, Whitman County.

Dr. J. A. Balsinger, of Colfax, was operated on at the St. Ignatius Hospital on January 22, for appendicitis. He is doing well at the present time.

Dr. W. S. Moore has moved from Okanogan to North Yakima, where he will locate.

The Okanogan General Hospital is the name of the new hospital at Okanogan which has been opened by Dr. L. H. C. Mintzer, who has purchased the equipment from Dr. W. S. Moore.

BRITISH COLUMBIA.

The Antivaccinationists were out in force at Cedar Cove, Vancouver, to protest against the recent government order for compulsory vaccination. Their arguments were as ridiculous and unscientific as usual and, if it were not for the seriousness of the matter, would make laughable sketches for the vaudeville stage. One man asserts confidently that Jenner's discovery has had nothing to do with the decrease in smallpox throughout the world; another, that ordinary cleanliness will prevent smallpox perfectly well, and still another, that vaccination not only does not decrease smallpox, but actually causes the spread of it.

Vancouver Druggists have taken a most praiseworthy step recently in their decision to stop the sale of cocain, morphin, liquor, and medicines containing the same, without the order of a physician. The British Columbia Pharmaceutical Association is the first body of its kind in America to take this step of its own volition, and the decision has been made binding by incorporating it in the laws of British Columbia.

Dr. and Mrs. J. M. P. Chalmers, of Vancouver, arrived recently from a trip of three or four months throughout the East. Dr. Chalmers visited during this time at a number of noted clinics in the eastern part of the United States and Canada.

IDAHO.

Prison Labor Is to Be Used in the construction of the State Sanitarium for Feeble Minded and Epileptics, near the state capital, the exact location to be decided by a commission. The buildings are to be thoroughly modern and constructed of brick or stone.

REPORTS OF SOCIETY MEETINGS

MEETING OF SOUTH IDAHO DISTRICT MEDICAL SOCIETY, NAMPA, IDAHO, JANUARY 25, 1911.

The society met at the Commercial Club rooms.

Address of Welcome was given by Mr. C. R. Hickey, representing Mayor Dewey.

The Quarterly Report of the Secretary-Treasurer was read and approved

The following new members were reported as elected at the last meeting of the state association: G. G. Espe, Eagle; James C. Bartlett, Bruneau; H. Goodfriend, Albion; W. S. Titus, Boise; S. B. Dudley, Weiser.

The following program was presented:

Postpartum Infection.—By Dr. H. Goodfriend, Albion. Discussed by Drs. Maxey, Stewart, Ross, Murray and R. O. Payne, of Ontario, Ore.

Pyonephrosis.—By Dr. J. L. Stewart, Boise. Discussion by Drs. Glase, Ross, Bresee and Dutton.

Woman as a Physician.—By Dr. Mary Johnston, Boise. Discussed by Drs. Stewart, Ross, Dutton and Murray.

Demonstration of the Method of Treating Fracture of the Neck of the Femur.—By Dr. S. D. Calouge, Nampa.

Presentation of Case of Obscure Brain Lesion.—By Dr. O. B. Bellar, Nampa.

Report of a Case of Malignant Tumor of Liver.—By Dr. S. D. Calouge, Nampa.

Cerebral Hemorrhage. Notes on Surgical Anatomy and

My treatment has been tonic and supportive, using plenty of quinine and iron, together with veratum viride when the temperature was over 100 degrees and the use of hot, moist, antiseptic dressings over ulcer.

Case 1. Residence Willard. First saw on August 10. Patient was in bed. Had been sick for four days. Had had a slight chill with some headache and general aching. Had been stung by a large, yellow horse fly four days before, just in front of the right ear. He had noticed a red swelling about the bite which later formed into a whitish blister. When I saw him he complained of feeling tired and worn out, tongue medium brownish coat, bowels regular with physic, abdomen flat and soft, some frontal headache. He did not complain of pain about the thin, punched-out ulcer except on pressure. The ulcer was discharging a bloody purulent serum. Temperature 100 degrees, pulse 80.

August 14. Temperature 101 degrees, pulse 96. Still tired and weak, slight tremor of hands and tongue; abdomen flat, slightly tympanitic; could not palpate spleen; bowels quite loose, typhoid in character.

August 16. Temperature 102 degrees, pulse 100. Some occipital headache and pain in back of neck. Still complains of being tired and weak and seems very anxious about his case. Tremor more marked and affecting his speech.

August 17. Morning: Temperature 102 degrees, evening 102 4-5 degrees.

August 18. Temperature 102-103.1 degrees. Tremor marked over whole body, some rigidity of neck and pain on movement; complains of chilly sensations.

August 19 and 20. Symptoms increase. Examination of retina showed no congestion. Temperature 103-104.3 degrees.

Died August 21. Postmortem showed no typhoid ulcers, hence the diagnosis of infective meningitis due to the ulcer on face caused by fly bite.

Case 2. August 26, 1908. R. C. came to me with the punched-out ulcer on back of neck. Trouble began ten days before with the bite of a large horse fly. Glands of neck swollen, headache and dizziness. Temperature 98.3 degrees. Said he had chilly sensations a week before coming to me. Recovery complete in two weeks under above treatment.

Case 3. August 17, 1908. R. T. had been sick twelve days, complaining of being dizzy and says that he chills whenever he goes to work in the sun. Has a yellow septic look and feels tired all of the time. No appetite. Temperature 98.2 degrees. Presents punched-out ulcer on right cheek with a sero-purulent discharge. Says this bite was very painful for several hours after receiving it.

August 31. Appetite good, sore nearly healed and he begins to feel like himself.

Case 4. Boy, 15 years. August 15. In bed sick six days. Fly bite on left wrist a few days before this. Temperature 104 degrees, pulse 100. Headache, backache, and says he is all knocked out. Glands of left arm and axilla enlarged and painful and whole arm covered with red streaks.

August 16. Temperature 102 degrees. August 17. Temperature 101 degrees. Feels a little better. August 18. Temperature 100 degrees. Feels good, but arm quite tender and sore. August 22. Up and around. Temperature 98.2 degrees. Punched-out sore on wrist beginning to heal. Large swelling in axilla perfectly hard. Says he feels rocky and can not eat.

August 26. Still unable to work and feels languid. Ulcer on wrist nearly healed, swelling in axilla nearly gone.

September 6. Eats well and feels more like work.

Case 5. August 30. Came to me with swelling in right groin from which I took one-half pint of pus. He gave the history of having had a punched-out ulcer on ankle just above shoe top, due to bite of fly. At time I saw him he appeared very anemic and said he felt like typhoid fever and that he had been in bed a few days after the bite. Recovery complete in ten days.

Case 6. August 12, 1908. Had punched-out ulcer on back of right hand, swelling of whole arm and enlarged glands. Temperature 102 degrees. Looks septic. Had to put him to bed on the 18th and lanced large abscess on elbow. From then until the 9th of September, when I lanced a large abscess in axilla, patient was in bed in a typhoid state with temperature 100 degrees to 101½ degrees. Made a slow recovery from September 9 to October 1.

I have seen three cases of a like nature this year of my own and several cases belonging to other physicians in this locality. My cases were all bitten on the back of the hand.

During the summer of 1908 I also had some ten cases from the Corrine and Promontory country of another disease which may have been caused by fly bite. The patients generally gave the following history: Chills, headache, backache, fever and malaise, together with marked swelling of all the glands of the neck including the submaxillary and parotid. This general condition lasted for a week or ten days when it would come to a head about some gland and relief would promptly take place when the point of suppuration could be found and drained.

DISCUSSION.

Dr. E. C. Rich, Ogden: For several years I have seen cases of the same thing that Dr. Pearse has described in his paper. I have seen cases corresponding to the two types he has described, with chills, fever and prostration for a few days. They usually get better in the course of ten days or two weeks, and many recover without any suppuration of the glands. I am sure that only a small percentage of these cases have come under the treatment of doctors. Then there is the other class which he described so well—the punched-out ulcer from the bite. I saw this case twice with Dr. Pearse.

NORTHWEST MEDICINE

The Journal of the State Medical Associations of Oregon Washington, Idaho and Utah

Devoted to the Interests of the Medical Profession of the Pacific Northwest.

Editorial Office, 719-22 Cobb Building, Seattle, Wash.

MARCH, 1911.

EDITORIAL

REPORT ON TUBERCULOSIS OF THE BOARD OF HEALTH OF THE STATE OF WASHINGTON.

The State Board of Health has published its report to the legislature upon the bill for a tuberculosis sanatorium, which was presented to the legislative session of 1909. The report comprises summaries and conclusions of the tuberculosis situation in the state. It includes statistical data on the prevalence of tuberculosis, the consideration of which will aid in an intelligent opinion upon the advisability of the state entering upon the treatment of this disease; also enabling one to form a judgment upon the question of sanatorium treatment. Some interesting statistics are presented as to the death rate from tuberculosis during the last three years which show a steady decrease in pulmonary cases, with a corresponding increase in all other forms, making the total death rate a little higher for each of these three years. A comparison of the tuberculosis death rate in Eastern and Western Washington shows the rate somewhat lower east of the Cascade mountains. The report includes the death rate for these years for each of the first class cities, as well as a separate table of the death rate in all of the counties.

The conclusions which the Board reaches on the subject under discussion are as follows:

That the state has a social and economic duty to perform in relation to the tuberculosis question. That the educational campaign should be extended.

That an efficient system for the notification and registration of consumptives is our most needed forward step at the present; and that such an act should be passed at the present time.

That all general sanitary reforms and improvements will help mightily in the struggle against tuberculosis, and that for this reason, as well as many others, every state and community should forward such sanitary advancements.

That the late stage, or dying case of tuberculosis is the most serious.

That sanatorium treatment of early cases is not so important as the care of the above, and should come second. That it is necessary to treat far-advanced cases reasonably near home. That early and advanced cases should not be handled indiscriminately in the same institution.

That institutions for early cases should be primarily teaching institutions.

That tuberculosis cases of far advanced type should not be treated in general hospitals, nor left at county poor farms, where they are almost certain to infect others.

The recommendation is made that a commission be appointed to report to the next session of the legislature upon an all around plan for handling the tuberculosis question, the commission to consist of the State Commissioner of Health and one of the members of the Board, a member of the State Medical Association, the State Labor Commissioner and representatives of the State Federation of Labor, the State Federation of Associated Charities, the voluntary associations for the study and control of tuberculosis and a member of the State Board of Control.

C. A. S.

LEGISLATION OF INTEREST TO THE MEDICAL PROFESSION BEFORE THE IDAHO LEGISLATURE.

The State Board of Public Health has proposed a number of bills to aid in securing better protection to public health but only a few of the minor ones have yet been passed, the most important being that relating to inspection of dairies and slaughter houses. The principal measure presented is that relating to the securing of data for vital statistics which will really be of value, the present law being defective in that regard. A bill has been introduced, so amending the present medical practice act as to compel the State Board of Medical Examiners to license without examination practitioners coming from other states, and presenting certain credentials. The present statute gives the board of examiners authority, at their own discretion, to license without examination those who come up to a certain standard, as indicated by credentials they may offer. If this matter be made mandatory, it will simply mean that the courts, instead of the board of medical examiners, will be called upon to pass on these cases. A bill providing for examination and registration of graduate nurses has been introduced and will probably be passed. This bill in no way restricts the practice of nursing,—it simply provides for the registration of those who have had a certain amount of training. Results of the action of the present session of legislature will not be known in time for March issue of this journal.

J. M. T.

to be an active factor in the production of tubercular meningitis because of the damaging effect the explosive coughing attacks have upon the bronchial glands. This theory presupposes an existing infection of the bronchial glands.

In our own community and in the cases that I have seen it does not appear that the foregoing remarks as to etiology will apply except in the specific instances mentioned. In every case there has been just that condition of affairs that one looks for in the development of tuberculosis in the ordinary way. These conditions are so familiar that they are not worthy of discussion just here. Practically all the cases seen developed in the summer time. Nearly all seemed to follow a state of general debility incident to the diseases of summer time. In these cases, then, we should look for the things indicated above; i. e., unsanitary general conditions combined with some special cause, such as heredity, incident acute diseases, etc. Of course there must always be the element of direct contagion or infection with the tubercle bacillus in the usual manner.

The symptoms are well deliniated in the two cases recited at the beginning of this paper, for they were both very typical of the disease. For the sake of description the symptoms are usually divided into three different stages, the first being the stage ot irritation, the second the stage of pressure and the third the stage of paralysis. If one should, however, undertake to diagnose his cases by a discernment of the different stages of the diseases he will find himself often misled, for they are many times so interwoven in a symptomatic way as to be not distinguishable as separate stages.

The typical case begins with a more or less prolonged picture of the first stage. There is peevishness, disinclination to play, poor sleep and some disturbance of digestion. The latter are usually confined to the two symptoms, loss of appetite and vomiting. In some of my cases there was an abnormally good appetite, while at the same time food that was taken would often be vomited. The bowels are usually constipated. Only occasionally is there a tendency to diarrhea and that instance is apt to be a case where there has been a preceding gastro-enteritis. The twelfth case had rather severe diarrhea for about six weeks before the symptoms of meningitis developed. I believe that the diarrhea in this case was a mixture of conditions—some gastro-enteritis and some tubercular meningitis.

During this first stage in its early part it is scarcely to be expected that one will diagnose the true state of affairs, but there comes a time when the general conditions will arouse a suspicion of what is going on. Paleness, but with a delicate flush to the skin, loss in weight, occasional vomiting that will not be controlled, irritability, indifferent sleep, capricious appetite and, in fact, a general condition that certainly does speak of tuberculosis.

About this time the patient is nearing the stage of compression. There is great variability of the temperature. Some cases run a typical tubercular course of temperature, others are subnormal all the time, while others run a high temperature at times. Therefore, it is not a symptom that can be depended upon except that its erratic character may be a matter of evidence.

Much has been said about the pulse in this condition. As a matter of fact, I have never been able to demonstrate to myself the value of the so-called cephalic pulse. It is found best and oftenest in the later part of the stage of irritation and the early part of the stage of compression. Later, however, the pulse is just about what one would expect to find in a patient that is very ill.

Convulsions are expected to attend the stage of pressure. They may occur as the very first symptom of the disease, but, so far as I have been able to discern, they usually usher in and attend the stage of pressure. The third case was taken with convulsions about three months before death. Something unusual about the attack which lasted some hours caused me to utter a word of warning, but beyond that nothing of note happened for the time mentioned. The second and third stages lasted but a week. It is noted above that convulsions may not be a prominent symptom, for one patient died in the very first convulsion that occurred. But at times this symptom is simply terrible beyond description. The twelfth case had the most fearful convulsions unless kept deeply under the influence of chloral hydrate. Convulsions can be counted upon to occur and one must be prepared to control this most violent symptom.

Rigidity of the neck muscles is found in greater or less degree in all cases at some time during the course. It may be anything from a mild rigidity of the neck to a violent condition involving all the back muscles and producing opisthotonos.

The abdomen, if it shows any distention, will be but mildly afflicted in this way and as the disease progresses there will appear retraction of the walls of the abdomen. Sometimes this symptom is much marked and again it can hardly be said to exist.

Symptoms of pressure must in the very nature of things give way to symptoms of paralysis. The eye soon shows disturbance by unequal, unresponsive pupils and divergence and incoordination of the eye-balls. These symptoms are usually speedily followed or accompanied by convulsions. The last stage is apt to last but a few days. The already unconscious patient lies in bed with little if any muscular movement, unless the quiet be disturbed with convulsions.

There may be periods of consciousness during the second stage when the patient will recognize friends and carry on a conversation, but the intervals are short, not lasting over a day or perhaps but a few hours. Consciousness absolutely ceases after the quiet of the last stage begins. The pulse rises to 150 per minute or thereabout, respiration is disturbed, the temperature is subnormal or else very high and plainly death will soon occur.

Diagnosis during the early stages of tubercular meningitis is not easy. During the later parts of the course it presents little difficulty. The misleading element seems to be the fact that prominence of digestive symptoms in the first part of the course, leading to a diagnosis of gastritis or gastro-enteritis, is apt to cause one to overlook the true state of affairs in an adherence to the original diagnosis. Occasional vomiting in children under ten years old that is not relieved by ordinary means, or that is at least but temporarily benefited, should always put one on guard. Lately I have had to differentiate between syphilitic brain lesions and tubercular meningitis. The matter is not a difficult one because of the fact that there is usually such other lesions as to point to syphilis. Autopsy in these cases has confirmed the correctness of the diagnosis. Latterly we have had also to differentiate between tubercular meningitis and anterior poliomyelitis. This matter has been well elucidated recently by Dr. House in his article on this subject. Certain forms of gastroenteritis occurring in summer time present such a train of cerebral symptoms that might at times offer some difficulty, but careful examination into these cases will clear the matter up easily.

The prognosis being so universally gloomy in these cases leads one to consider that perhaps, were the diagnosis made sooner and greater consideration given to early treatment, the ending might at times be different. The tuberculin test used in any approved manner in any suspected case, be the suspicion ever so slight, is recommended as an early means of discovering the true condition. Lumbar puncture is recommended also. That method seems to me to be too slow. One would hardly expect to use it until some signs of pressure were existing and then it would be quite too late to do any good.

Percussion of the cranium in order to determine the conditions existing in the ventricles is described in text-books and practised by some masters of that art. It also is open to the objection that gross changes must occur before the percussion note would change. Gross changes mean a fatal prognosis.

Drug treatment is not of any avail except such as meet indications. In all cases I have used chloral hydrate to control convulsive seizures and have never been favorable to the use of opium in any form.

INSECT BITES.*

By R. A. Pearse, M. D.

BRIGHAM CITY, UTAH.

Slow healing, infected ulcers are often caused by scratching the bites of the body louse. Infection may also take place through the bites of fleas or bedbugs. Scabies is accompanied by severe itching, and the excoriations caused by scratching often becomes infected, thereby causing the burrows of the insects to be obscured.

The sting of wasps, bees, hornets, yellow-jackets, etc., cause more or less dermatitis, accompanied by pain, burning, stinging and itching. General symptoms rarely occur, although sometimes we get severe prostration, vomiting, purging, delirium, general edema and death. The bites of poisonous spiders, scorpions and centipedes may cause severe prostration, sometimes lasting for several weeks and many times causing death. The Texas cattle fever is transmitted by ticks. The Rocky Mountain spotted fever is caused by the bite of an infected wood tick. It is a well known fact that the bite of a certain infected mosquito is the cause of malaria and of yellow fever.

I will give you the histories of a few cases of an infection probably caused by the bite of the large black and yellow horse fly, all cases of which, so far as I know, have been distributed over a definite area about Brigham City. This disease made its appearance in August, 1908, and August, 1910. The point of infection in all of my cases has been on an exposed portion of the body. All of the cases give a history of having been bitten by the large horse fly. Most of the patients say they had been bitten by the same kind of flies many times before during that season. The incubation period varies from two to five days.

In all the cases there has been marked swelling of the glands and lymphatics about the area of the bite. In about one-half of the cases some of the glands have gone on to suppuration. Most of the cases have had severe chills, sometimes during the incubation period, others having chilly sensations. The temperatures have run from 98 to 104 degrees. The duration of the disease has been from one to four weeks, the severity of the disease varying from slight malaise to death.

All of the bites have gone on from a red infiltration like a mosquito bite, to complete breaking down of the tissues and sloughing, forming a punched-out circular ulcer about one-fourth inch in diameter and one-eighth inch in depth. Within a few hours of the bite there forms a water blister at the apex of the infiltration, this soon changing to pus and then the tissue begins to slough away, the discharge being like a sero-purulent mucus.

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*Read before the Sixteenth Annual Meeting of the Utah State Medical Association, Salt Lake City, Utah, Oct. 3-4, 1910.

Treatment. Discussed by Drs. Stewart, Kellogg, Ross and Dutton.

Presentation of a Specimen of Obliteration of Portion of the Large Bowel in the Fetus with Imperforate Rectum.—By Dr. G. O. A. Kellogg, Nampa.

Dr. J. N. Loree, of Boise, was elected to membership.

Morning and afternoon sessions were held and a dinner was given at the Dewey Palace Hotel by physicians of Nampa to visiting physicians at 1 p. m.

On motion of Dr. Johnston, a vote of thanks was tandered the Nampa physicians for their cordial hospitality.

There were present: Drs. J. C. Patterson, James L. Stewart, E. E. Maxey, R. L. Glase, Mary Johnston, J. H. Murray, S. D. Calouge, O. B. Bellar, A. J. Hosmer, G. O. A. Kellogg, H. P. Ross, R. W. Quick, R. O. Payne, C. L. Dutton, C J. Bresee.

An excellent meeting was had notwithstanding the small attendance.

OREGON.

PORTLAND CITY AND COUNTY MEDICAL SOCIETY.

Pres., A. E. Rockey, M. D.; Secty., G. S. Whiteside, M. D.

The Portland City and County Medical Society met in their rooms in the Medical Building at 8:30 p. m. Wednesday, January 18, 1911, with the President, Dr. A. E. Rockey, in the chair.

Members present: Drs. Baird, Bodine, Baar, Buck, Bettman, Coffey, Equi, Ettelson, Flagg, Gellert, Hawke, Johnson, Knox, McCollum, Parrish, Pettit, Pease, Kiehle, Patton, Poley, Rand, Rockey, Rosendorff, Richardson, Murbach, Sommer, Stedman, Swensson, Sternberg, Sifton, Walker, Webster, Williamson, Jones, Wall, Whiteside.

Elected to membership: Drs. Charles M. Rybke, Philo E. Jones and E. H. Anthony.

Papers.

"The Value of Indican and Bile Tests in the Diagnosis of Abdominal Diseases."—Was read by Dr. Gustav G. Baar. Many diseases of the gallbladder remain unrecognized. A definite laboratory test would be of great value. We have such a one in the test for indican and bile in the urine. Gives conclusions after making a large number of such tests. Indican always indicates abnormal putrefaction process in the intestines.

"Treatment of Joint Affections by Injections of Formalin Glycerin." (Page 66)—By Dr. C. L. Poley.

In discussion, Dr. Coffey agrees with Dr. Baar. Says he has proven his conclusions by his cases, but he questions the deduction as to why these results take place. Tells of the functions of the three primitive portions of the intestinal canal. Sometimes an appendix will produce hyperchlorhydria. Then he tells of nature's method of preventing the passage of food along the canal by pylorospasm. This accounts for the vomiting in appendicitis. The duodenal sphincter also closes and shuts bile out of the intestine causing its absorption. This is why Dr. Baar gets these results.

Dr. Philo Jones speaks of the test for indican in cases of mucous colitis, also in myalgia and neuralgia.

Dr. Wall enjoyed both papers.

Dr. Swensson agrees with Dr. Baar.

Dr. Rosendorff is interested in Dr. Baar's method of diagnosticating nervous hyperacidity from the indican reaction.

Dr. Rockey speaks of finding sugar in urine in three intussusception cases.

Dr. Baar, in closing, said all conditions of appendicitis and cholecystitis do produce hyperacidity. The list for indican differentiates between gallstones and nervous hyperacidity. In constipation cases (spoken of by Dr. Philo Jones) he only found indican when enteroptosis was also present. In headache and neuralgia when indican is found. it is due to autointoxication. He suggests either cerebral sugar or pancreas sugar in Dr. Rockey's cases.

Dr. Pettit showed a five-year-old boy who has a congenital absence of fibula.

Dr. Whiteside showed a patient injected with "606." Also passed around charts of three other cases.

Dr. Rockey reported eight cases treated with "606." Good results so far.

Dr. Equi reported a case given "606" intramuscularly with good results.

Dr. Sommer reported a case with severe buccal lesions which cleared up, but a week later a recurrence. In such cases a second injection should be given. Also two other cases in which the immediate result is good.

Dr. Baar says the intravenous method is good, but the routine practice should be the intramuscular. It should be done in the physician's office.

Dr. Equi thinks bed treatment imperative.

Dr. Wall asks if any case of syphilis of the nervous system has been so treated.

A meeting of the City and County Medical Society was held in their rooms in the Medical Building, at 8:30 p. m., Wednesday, February 1, 1911, Dr. A. E. Rockey in the chair.

Members present: Drs. Baar, Buck, Flagg, Greene, House, Hamilton, Johnson, King, Kiehle, Keene, Koehler, Knox, McArthur, Marsh, McDaniel, McCollum, MacLachlan, O'Day, Parrish, Rockey, Rand, Rybke, Sheldon, Sifton, Stedman, Wall, Webster, Wolf, Whiteside. Visitors: Dr. Edward A. Rich, of Tacoma. Proposed for membership: Dr. Henry Fleckenstein.

Paper.

"Child Surgery."—By Dr. E. A. Rich, of Tacoma. Requires special training in objective diagnosis. Analysis of 1,000 cases in infants under one year operated upon in the Charite Hospital, in Berlin, four per cent. mortality. These operations were for various conditions.

Describes methods of implanting tendons into periosteum. Speaks at some length on the use of heavy silk for the formation of silk ligaments. The aim of the orthopedist is to choose that procedure which will fit the case.

In discussion, Dr. C. W. Keene, of Silverton, said the paper is an excellent resume of some of the latest methods of doing this work. He doubts if it is possible to tell what can be done with such muscles as show no function until full measure of improvement has been regained.

Dr. Hamilton asks Dr. Rich at what age he advises cleft palate operation.

Dr. Baar would like to ask Dr. Rich how long after the acute symptoms of infantile paralysis surgery might best be done to correct deformity.

Dr. Rockey speaks of the causes of paralysis of the deltoid muscles.

Dr. Rich, in closing, says he believes radical early surgical interference preferable to waiting. He tests muscles with the galvanic current and uses this as a guide. In regard to arthodisis, he believes about the 9th year best. The X-ray should be the guide in this operation. The best time to do cleft palate operation is before the eruption of the teeth.

Dr. House moves a vote of thanks to Dr. House. Voted.

Dr. Rockey brings to the attention of the society the work of the Russel Sage Foundation. Mr. Eliot speaks concerning the work of Dr. F. Park Lewis, of Buffalo, for the prevention of blindness. He asked for the co-operation of a medical lay committee to carry on the work in Oregon.

Dr. McCollum moves the following resolution:

Resolved, That the president of the City and County Medical Society of Portland be instructed to appoint a committee on Prevention of Blindness to consist of four members, one representative each from the ophthalmologists, the obstetricians, and the general practitioners. The object of such committee to be the taking of steps for the suppression in this state of ophthalmia neonatorum and other preventable causes of blindness and eye trouble, and to co-operate to these ends with the state board of health, the state school for the blind and any other legitimate agencies that may also have the prevention of blindness among their objects, and the president of this society to be ex-officio the fourth member of the committee.

CASE REPORTS.

Dr. Marsh shows the case of a sarcoma of the pelvis in a baby.

The Portland City and County Medical Society met in their rooms in the Medical Building, at 8:30 p. m., Wednesday, February 15, 1911, President Dr. A. E. Rockey in the chair.

Members present: Drs. Bettman, Buck, Dammasch, Equi, H. Fenton, Gellert, Greene, Holden, House, Hamilton, Hyde, Flagg, Johnson, Koehler, Knox, Kiehle, F. Manion, MacLachlan, McArthur, H. Nichols, O'Day, Parrish, Pettit, Rockey, Roth, Rosendorff, Ricen, Rybke, Richardson, Stedman, Steruberg, Smith, Sabin, Sifton, Williamson, Weir, Wolf, Whiteside. Visitors: Drs. Spurrier, Paul Rockey, Hays.

Election of members: Dr. Henry Fleckenstein.

Dr. Hays shows a boy on whom a mastoid operation was done after scarlet fever, and later another operation for resection of the jugular vein because of sepsis in the lateral sinus.

Dr. Holden presents a tumor of the toe. Dr. Flagg presents a specimen from a case of tubal pregnancy.

PAPERS.

"Chronic Ulcer of the Stomach."—By Dr. George F. Koehler. Treatment should consist in rest in bed and rectal feeding for three or four weeks. If these measures are not successful after a reasonable time, a physician should call a surgeon. Describes the symptoms. The relation between ulcer and cancer very interesting and important. Therefore, cancer can be prevented by removing chronic ulcer. Recommends early surgical treatment.

"The Specialist and General Practitioner."—By Dr. Hamilton Weir. Each defined. As we progress in medical knowledge, we narrow the field of research. Advises more frequent consultation and more confidence between each and the other.

"Preventive Medicine."—By Dr. J. H. McArthur. Prevention of smallpox, cholera and typhoid. The use of "606" in syphilis, scarlet fever antitoxin and other methods in use fully described. Proposes further methods that would advance the welfare of the human race.

Discussion opened by Dr. Sternberg. Much pleased to hear such a surgical view of the subject of gastric ulcer from Dr. Koehler. Believes in excision of the ulcer.

Dr. George Parrish discusses Dr. Weir's paper. Believes a specialist should be proficient in his specialty and also in general knowledge.

Dr. Dammasch speaks of the prevention of blindness and of venereal diseases. Thinks the keynote of the whole subject is ignorance. This should be combatted by teaching.

Men on boards of public health should be trained in such work.

Dr. Hamilton speaks of carcinoma occurring after ulcer of the stomach. Recites a case of ulcer of the greater curvature.

Dr. Koehler, in closing, speaks especially on when to operate and when not to.

Dr. Rockey believes all gastric ulcers should be excised, no matter where they are.

Dr. Weir closes. Agrees with Dr. Parrish.

WASHINGTON.

KING COUNTY MEDICAL SOCIETY.

Prest., G. B. McCulloch, M. D.; Secty., H. E. Coe, M. D.

The first regular semi-monthly meeting of the King County Medical Society was held in the Seattle Chamber of Commerce, Seattle, Wash., February 6, at 8 p. m. The meeting was called to order by the President, Dr. McCulloch, about eighty-five members being present. The minutes of the previous meeting were read and approved.

PATHOLOGIC SPECIMENS.

Tubercular Testis.—C. F. Davidson presented a specimen of tubercular testis, calling especial attention to the general distribution of the tubercles. He also presented a specimen of a brain, showing an endothelioma the size of a hen's egg, together with case history and report of operation.

CLINICAL CASES.

Cerebral Decompression.—Alfred Raymond presented a case upon which cerebral decompression had been done, and called especial attention to the steady improvement in paralysis.

Hysterical Paralysis.—R. C. Hill, of Irondale, presented a case of hysterical paralysis, with report of treatment, and showed the results. In the discussion of the foregoing cases, H. J. Davidson asked if there was any muscular atrophy in Dr. Hill's case, to which Dr. Hill replied in the negative.

Lymphatic Leukemia.—The discussion of John Hunt's case of lymphatic leukemia was opened by O. J. West, who gave a very interesting account of present theories of the disease, mentioning especially that it was considered by some as a sarcoma of the blood. He stated that cases showing a preponderance of large mononuclear cells run a chronic course, while those showing small mononuclear cells run an acute course. Dr. Hunt's case showed both kinds of cells, and so would probably run a subacute course.

Bruce Elmore read the main features of a proposed bill relating to the duties of the State Board of Health, following which H. E. Allen read the bill itself.

J. H. Lyons read portions of House Bill No. 204, concerning the regulation of typhoid fever.

E. E. Heg stated that the latter bill was framed without the sanction and against the advice of the State Board of Health, and that it was disapproved by the board. He stated in regard to points to which most of the members of the society objected were already in the law; that he considered the proposed bill, which was really a codification of the existing laws, to be necessary on account of the fact that many of the provisions at present were inefficient because of conflicts. He stated also that there had really been no occasion to enforce many of the seemingly objectionable provisions.

On motion of John Hunt it was voted that the bills read be referred back to the Board of Trustees, with blanket power to act.

The chairman of the Public Health and Legislation Committee read House Bill No. 215 concerning proposed changes in the present Medical Practice Act, which had been referred to his committee by the Committee on Medicine, Surgery, Dentistry and Hygiene, at Olympia. H. A. Wright objected to this bill on the ground that it afforded no advantages over the present law. It was moved and seconded that the society place itself on record as opposed to any change in the present Medical Practice Act. Carried.

Mr. S. E. Eliot addressed the society concerning the work of the Committee on the Prevention of Blindness, of the Russell Sage Foundation.

David DeBeck, of the National Committee on the Prevention of Blindness, moved that the following resolution be adopted by the society:

"Resolved, That the President of the King County Medical Society be instructed to appoint a Committee on the Prevention of Blindness, to consist of four members, the committee to be constituted as follows: One representative each from the ophthalmologists, the obstetricians and the general practitioners, the president of the society to be ex-officio the fourth member. The object of such committee is to be the taking of steps for the suppression in this state of ophthalmia neonatorum and other preventable causes of blindness and eye trouble, and to cooperate to this end with the State Board of Health, the State School for the Blind, and any other legitimate agencies that may have the prevention of blindness among their objects."

Seconded by G. S. Peterkin, who is also a member of the National Committee. Carried.

The reading of a paper on "606," by G. S. Peterkin, was postponed at his own request.

C. L. Dixson and T. J. Costello were elected to membership. The applications of F. T. Hyde, J. P. Schutt, A. L. Victor and B. J. Lloyd were read. F. T. Hyde becomes a member by transfer from the Massachusetts Medical Society, satisfactory credentials having been presented to the Board of Trustees. B. J. Lloyd becomes a member by virtue of holding a commission in the Public Health and Marine Hospital Service.

The regular semi-monthly meeting of the society was held in the Seattle Chamber of Commerce, in the Central Building, at 8 p. m., February 20, 1911. The meeting was called to order by the president, Dr. McCulloch, about 95 members being present. In the absence of the secretary, A. T. Heavenrich was appointed secretary pro tem.

PAPER.

"606," Its Place in Medicine Today and in the Future.—By G. S. Peterkin. He called attention to the fact that this was a report of personal experience and conclusions, the same being based upon his records of 22 cases. The probable results of the present common conception that one dose is curative will spread syphilis broadcast, on account of an erroneous idea that they are free from the disease. Hence every case should be controlled by the serum reaction, and should be kept under careful observation until the cure is certain.

Following the paper, two cases were shown, one a tertiary case and the other a comparatively early one.

In the discussion, L. H. Redon commended the conservatism of the paper. He stated that "606" is a wonderful remedy from the symptomatic standpoint. He advised against using the suspension intramuscularly, stating that results had been better from the use of the solution. He called attention to the rapid action when used intravenously.

F. L. Ashton stated that some cases apparently received only temporary benefit, as he had seen recurrences in three weeks. In his opinion, the drug does not work well after mercury, and he thinks that it will not come up to the present expectations. The only bad effect in his experience was an attack of fainting, lasting 15 or 20 minutes about a half hour after the injection. He has seen serious eye lesions following the use of sodium cacodylate.

E. P. Fick reported a case in which he thought that "606" did not work well. The patient had come to him complaining of very severe headaches, which could be only partially relieved by the use of opiates. Cerebral syphilis was suspected, and sodium cacodylate used for some time with only temporary results. Following this, "606" was given, and in 48 hours the patient was delirious and almost maniacal. To correct this condition, potassium iodide was given, and there has been slow but sure improvement.

A. T. Heavenrich stated that he thought the first enthusiasm was diminishing. He reviewed the opinions of Ehrlich, Schreiber and others, as well as the reports in current literature.

George W. Beeler asked if a heart lesion is any contraindication to the giving of "606."

David DeBeck stated that bad results of this treatment are being reported by the oculists, and that any ocular complication is a contraindication for the administration of the drug.

In closing, Dr. Peterkin stated that he intends to use "606" alone in some cases, mercury alone in others, and the two together in still others, and report his conclusions at some future time. In reference to Dr. Fick's case, he said that Ehrlich distinctly states that "606" should not be used following the recent use of any other arsenical substance. He thinks it unjust to count this case against "606." He emphasizes the care necessary in intravenous injections. The eye symptoms mentioned by Dr. DeBeck are as frequently seen after other preparations of arsenic as after "606." He thinks that heart lesions are a contraindication.

Dr. Olmsted, president of the Spokane County Medical Society, was called upon by the president, and addressed the society in his usual happy vein.

The committee on the pathologic museum reported its readiness to receive specimens and outlined a system of indexing.

The application of L. L. Stevens was read. He becomes a member by transfer from Snohomish County. J. P. Schutt and A. L. Victor were unanimously elected to membership.

SPOKANE COUNTY MEDICAL SOCIETY.

Prest., E. D. Olmsted, M. D.; Secty., Frank Hinman, M. D.

The regular meeting of the Spokane County Medical Society was held Feb. 23, 1911, in the assembly room of the Old National Bank Building. There were 55 members present and seven visitors.

PAPERS.

Surgical Mortality and Morbity Due to Delay.—By Dr. H. B. Holden, of Portland, Ore.

Doland, in opening the discussion, complemented the writer and agreed with him absolutely with regard to his remarks on morphin. It should be the rule, he said, of every practitioner to never give morphin till after the diagnosis has been made and then only for the comfort of the patient. If this rule were followed many lives would be saved.

Northrop expressed his belief in the mot of some doctor who said that every case of acute abdominal disease which resists 24 hours' medical treatment should be looked upon as surgical.

Matthews believes in early operation in all surgical conditions. As to morphin, its use is very deceiving. As a whole surgeons delay too much after its administration.

Libby said that Holden's paper had most clearly and forcibly presented the facts which could not at all be doubted by any surgeon. But, he added, it is a pity that many physicians do not appreciate these facts. They should appeal to the general practitioner as well as to the surgeon.

Powell questioned the high percentage of suppurative cases as given in the paper as due to delay, and quoted Ochsner in support of this contention.

In his final closing, Dr. Holden said it is important to keep in mind that one-half of our surgical mortality is due to delay. He insisted, too, on the general statement that two of every ten cases of acute appendicitis would go on to abscess or gangrene if they were delayed for operation. Ochsner's treatment is not now practised by the author, but he operates immediately whenever he recognizes a case. Murphy has pointed out that this method has increased the mortality of appendicitis, and Holden said that it had undoubtedly caused a good many deaths because of the delay.

Reinfection in Syphilis.—By Dr. E. R. Northrop, with report of a case.

Johnston opened the discussion with a well worded compliment for the excellence and completeness of this case report, and added that many of us would have interesting cases if we always kept our eyes open.

McDowell expressed the possibility always present of considering a case of lues cured that is not cured.

Dr. C. F. Eikenbary exhibited a new stretching apparatus for treatment of fractures of the femur and of certain hip joint conditions.

Libby asked whether such an apparatus would not be good for use in fracture of the shaft of the femur.

Kimball expressed his opinion of the usefulness of the apparatus but on account of the length of the program, and the fact that there were many points to be brought up in regard to the use of such a contrivance as exhibited, moved that the discussion of this be deferred to the next meeting.

Principles of Chemo-therapy, and the Wassermann Reaction as a Diagnostic Aid and Control of Treatment in Syphilis, Especially After the Administration of "606."—By Dr. Ray W. Matson, of Portland.

Northrop opened the discussion with his impression of the importance of frequent Wassermann reactions in the control of treatment.

Marshall spoke of the test not being an absolute specific but, as the Germans say, a "zufall," and of the possibility of some strains of the spirochaete not having a receptor for arsenic, in which cases the treatment would fail.

Hinman emphasized the fact that the test is not theoretically specific, that for antigen we do not need a syphilitic liver but may use that from an ox or guinea pig's heart or a normal liver, that the only true antibody in the test is the red blood cell amboceptor, the so-called luetic antibody not being a true immune body but some third substance that will unite with that used for antigen in the presence of a complement. The Noguchi test, while possibly oversensitive in 1 to 2 per cent, where the technical errors that give this oversensitiveness are carefully guarded against, is most valuable.

Johnston thanked and complimented the writer and said in regard to the specificity of "606," whereas this may not be absolute, since it relieves the symptoms it is a long way in advance of anything we have.

A. C. Johnson asked to know if there were any theories in regard to the Hg. treatment producing tabes.

WHITMAN COUNTY MEDICAL SOCIETY.

Prest., George Boyd, M. D.; Secty., J. E. Else, M. D.

The Whitman County Medical Society met in the office of Dr. McGregor in Garfield, Monday evening, January 16, 1911, with President Boyd in the chair.

Members present: Boyd, Palouse; Bumgarner, Thornton; Cardwell, Colfax; Harvison, Palouse; Divine, Elberton; Dix, Garfield; Else, Pullman; McIntyre, St. John; Palamountain, Colfax; Stevenson, Palouse, and Wiesel, Garfield. Visitors: Drs. Eikenbarry, Spokane; McGregor, Garfield; Palamountain, Colfax, and Mesdames Eikenbarry, Dix, McGregor, Wiesel, Boyd and Else.

The secretary's report was read and approved. The treasurer's report was read and referred to the auditing committee. Communications from Drs. Thomson and Yocum were read.

The following officers were elected: W. C. Cardwell, Colfax, president; J. W. Stevenson, Palouse, vice-president; J. Earl Else, Pullman, secretary; W. B. Palamountain, Colfax; George T. Boyd, Palouse, and W. N. Divine, Elberton, censors. W. B. Palamountain was elected delegate to the State Medical Association.

The matters of medical interest before the legislature were discussed. Owing to the fact that these matters demand much study in order to determine their value and as the time is short it was decided that the legislative committee should be instructed that our society was willing to abide by their judgment in these matters.

Upon suggestion of the secretary it was decided to postpone the March meeting to April on account of the roads and to invite the North Idaho District Medical Society to join us in a joint meeting in Pullman in June.

Amendments to the by-laws providing that residents of other counties and members of their local society may become associate members of our society by paying the county society dues were presented by the secretary. In accordance with the by-laws these amendments were laid on the table until the next meeting.

CLINICAL CASE

Dr. McIntyre presented a case to the society. The patient, a boy, had fallen from a pony last May, striking on his elbow. No fracture could be determined, but since there had been a loss of motion with atrophy. The case was carefully examined by all present and a flouroscopic examination made. A vote of thanks was given Dr. McIntyre and the father of the boy for bringing the patient before the society.

PAPERS.

Some Frequently Overlooked Infections as Etiologic Factors.—By Dr. Bumgarner. He said that local infection and suppurative foci, such as are found in enlarged tonsils, uterus and appendages, and the appendix, often cause such secondary diseases as endocarditis and arthritis. Vaughan has shown that the injection of protein substances may produce fever. These substances can be produced in the body. He believes that the tonsil is the greatest offender. It is well known that true rheumatism is usually preceded by tonsilitis. Rheumatoid affections also probably come from the tonsils. This is also the point of entrance many times of the bacillus of tuberculosis.

Dr. McIntyre, in discussion, agreed with Dr. Bumgarner relative to the tonsil as a source of danger but had seen some very bad throats where the tonsil has been previously removed. He believes that the thorough removal of a diseased tonsil is as important as the removal of a diseased appendix.

Dr. Boyd said he was very much interested, especially because of the tonsil having been selected as an illustration of the point the doctor wished to make. He stated he had seen a case where valvular heart disease followed tonsilitis without rheumatism being present.

Dr. Else reported finding the tubercle bacilli in the tonsils in a selected series of cases of chronically enlarged tonsils in adults.

Dr. Palamountain reported a case in a woman who contracted the disease from her child. The attack was by a brachial neuritis, then by inflammatory rheumatism, then by vague pains and stiff joints for several years. Upon removal of the tonsils all trouble ceased.

Dr. McGregor called attention to a recently reported series of cases by Hunner. He reported a case in a boy followed by otitis media, then rheumatism and then endocarditis.

Dr. Bumgarner, in closing, said we use the term rheumatism too much. We should use rheumatoid more.

Infantile Paralysis from the Orthopedic Standpoint.—By Dr. Eikenbarry. He stated the recent epidemic has been very carefully studied and that now there can be no question but the disease is transmitted from one to another. No specific has yet been discovered, but should one be, it will be of but little value unless given before the paralysis appears. The treatment of the acute case is that of the acute conditions. He does not believe that the ice pack to the back is of much value. As soon as paralysis appears the limb must be supported. He described a gas pipe frame that, covered with canvas, slightly hyperextends the spine.

Dr. Palamountain, in discussion, said he thought that the suggestion of support an excellent one. He believes the physician's part of the case ends when he finds paralysis.

Dr. Boyd was much interested in the paper, particularly the part that justifies our diagnosis in the mild cases. He reported a case in his own son.

Dr. Stevenson said he thought the paralyzed part should be put in a splint early but does not believe in putting a completely paralyzed part in a splint.

Dr. Eikenbarry, in closing, again emphasized the early care of deformity. He believes in training the child to use the muscles. He showed a brace he uses, making it out of celluloid dissolved in acetone.

BOOK REVIEWS

Edited by Kenelm Winslow, M. D.

Modern Treatment; the Management of Disease with Medical and Non-Medical Remedies. By Eminent American and English Authorities. Edited by Hobart Armory Hare, M. D., Professor of Therapeutics and Materia Medica, Jefferson Medical College, Philadelphia, etc. In two very handsome octavo volumes, comprising 1,800 pages with numerous engravings and full-page plates. Price per volume in cloth, $6.00 net; half morocco, $7.50 net, Lea & Febiger, Publishers, Philadelphia and New York, 1910.

A therapeutical renaissance is reigning. First, Forcheimer and Wilcox, and now the more elaborate systems of Hare, and of Musser and Kelly, claim our attention. It is a hopeful sign and an advance from the Teutonic, diagnostic and therapeutically nihilistic period of not long since. To begin with, there is a most admirable section by H. C. Wood, Jr., on Modern Pharmacology which is worthy of his able and celebrated progenitor. In this Wood points out the most practical matters about drugs, taking them class by class, and devoting particular attention to the representative drugs of each class. He emphasizes just the points which are usually ignored and takes a broad view of the subject. He shows, for instance, the futility of expecting results from diuretics unless the water supply is at the same time augmented; he gives special indications for the use of special drugs under each class in differing clinical conditions. It is altogether an illuminating and most interesting dissertation on what is generally a dry topic. Then follows an excellent section on Prescription Writing, by Hunsberger. This is notable in describing the best manner of giving all the more common drugs and combinations in the form of prescriptions. It is an eminently practical and useful section. Next comes a section on the untoward action of drugs, which takes up the effects of over-dosage rather than the more common toxic action of drugs.

In Part II. we have sections on climatology, by Barlow; exercise, by Storey; hydrotherapy, by Baruch; mineral springs, by Hinsdale; electro-therapeutics, by Price; X-rays, by Pfahler; nutrition and food, by Friedenwald and Ruhrah; epidemics and disinfection, by Kerr; serum therapy, by Park, and opsonins and vaccine therapy, by Potter and Avery.

In Part III. we find typhoid, by Riesman; scarlatina, measles, rubella and variola, by Hubbard; cerebro-spinal meningitis, by Dunn; pneumonia and pleurisy, by Meara; tuberculosis, by Landis; diphtheria, by Royer; rheumatism, by Clayton; plague, by Jackson; influenza, by Wilson, and yellow fever, by Agramonte. This gives the scope of this volume. There are some typographical errors, which always occur in the first edition, as in the scheme on page 112, the word tonic instead of toxic. No one is more peculiarly fitted for the editorship than Hare, and the result is an unusually practical and valuable book.

WINSLOW.

Practical Medicine Series, Vol. IX. Skin and Venereal Diseases. Miscellaneous Topics. Edited by W. L. Baum, M. D., and Harold N. Myer, M. D. Series 1909. Cloth. 245 Pp. $1.25. Year Book Publishers, 40 Dearborn Street, Chicago.

This volume is divided into two sections. The first considers skin and venereal diseases, the second, miscellaneous topics. Under skin we have rare and interesting cases of dermatitis, drug eruptions, syringoma, tuberculides, eczema, etc. There is a good chapter on the therapy of the dermatoses, including liquid carbonic acid snow, skin varnishes, and spirit lotions. Another chapter is devoted to radium injections for lupus vulgaris, Finsen light in variola and X-ray dermatitis. Under the treatment of gonorrhea in women, Goelet reports excellent results with irrigations of the urethra and bladder with iodin in aqueous solution, claiming rapid disappearance of the gonococcus. The chapter on syphilis is very interesting. It gives in detail the Wassermann, bringing out the great value of this reaction and states that iodide and mercury do not retard the test. A number of unusual modes of infection are cited, also gastric, cardiac, brain and acute visceral syphilis. The text on treatment is very good, most of it being devoted to the arsenical preparations, arsenous acid, the Asiatic pill, sodium cacodylate, atoxyl and Ehrlich's "606." Mercury and the iodides can be given with arsenic to advantage. The arsenic largely protects the nervous system from the ravages of syphilis.

Under miscellaneous are records of the earliest physician, an Egyptian of 4,500 B. C., the use of mercury for syphilis by quacks in the fifteenth century, biography of Robert Koch, practical suggestions in life insurance examinations, state control of medical practice and the value of vivisection. PEACOCK.

Technique of Reduction Cures and Gout. Part IX. Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition. By Professor Carl von Noorden, Professor Fisr Medical Clinic, Vienna. Authorized American Edition; edited and translated under the supervision of Alfred C. Croftan, M. D. Cloth. 112 Pp. $1.50. E. B. Treat & Co., New York.

This is the latest of the many monographs of von Noorden we have reviewed. His writing is always full of originality and interest. Under gout, the author shows that the elimination of both endogenous and exogenous uric acid is greatly lessened, except in the stormy acute periods of attacks when the organism becomes temporarily purified by unusual excretion. He shows the value of the determination of uric acid elimination in the urine on a purin-free diet as a means of diagnosis and as a guide to treatment. A purin-free diet is often advisable in severe cases of gout. While milk and its products, eggs and vegetables, generally come under this head, there are some exceptions. Thus cheese, from its great bacteria-content, may be rich in purins; also tea, coffee and cocoa. von Noorden explodes the theory of there being any difference in the action of dark and light meat, and he warns against the use of liver and sweet-bread in gout, both being examples of foods richest in purin. Calcium carbonate, and natural waters containing it, he finds most effective in nephrolithiasis. This, like all of von Noorden's work, is well worth reading, especially in this good translation. WINSLOW.

The Principles of Therapeutics. By A. Manquat, National Correspondent to The Academie de Medicine. Translated by M. Simbad Gabriel, M. D. Cloth. Pp. 298. $3.00. D. Appleton & Co., New York and London.

This is a book given to a general discussion of therapeutic considerations. The chapter headings will give one some idea of the subject matter. Views of various manners of conceiving therapeutics; forms of therapeutic action; action of medicines; doses; medicinal opportunity; primum non nocere; elements of therapeutic individualization; influence of environment; variations of therapeutic activity inherent in medicines; non-medicinal therapeutic actions; method in therapeutics; division of therapeutic agents. While many practical points of value are brought into the discussion, yet the work is on the whole prolix, verbose and dull. Thus, the author defines disease as "The disturbance of the habitual organic equilibrium by the fact of an abnormal force acting with sufficient intensity to modify the fixity of its reactions; the habitual play of its functions and at time its structure and chemical composition, thus giving rise to disorders which persist until the accomplishment by this living matter of elimination or destruction of the modifying cause or else its own adaptation to the presence of the disturbing force." This is indeed disease and one can hardly repress the feeling that the author ought to be treated for it. WINSLOW.

Bismuth Paste in Chronic Suppurations. Its Diagnostic Importance and Therapeutic Value. By Emil G. Beck, Surgeon to North Chicago Hospital. Illustrated. Cloth. 237 Pp. $2.50. C. V. Mosby Co., St. Louis, 1910.

Most readers will recall the flurry some four years ago when injections of bismuth paste were announced in the medical journals as a treatment for sinuses and in the lay press as a "cure for tuberculosis." Dr. Beck has since then maintained his confidence in the method, but has been its severest critic and the most careful student of its limitations and contraindications. This book represents his present belief and outlines in readable form the experience of the past four years. The composition of the mixtures, the technic of use and the rules for the selection of cases have been little changed. New fields of usefulness have been found, such as selected cases of emphysema, lung abscess, rectal and other fecal fistulae. The questions of bismuth poisoning and the causes of failure are helpfully discussed. FASSETT.

Surgical Diagnosis. By Daniel N. Eisendrath, A. B., M. D. Adjunct Prof. of Surgery Medical Dept. University of Illinois; Attending Surgeon to the Michael Reese and Cook County Hospitals, Chicago. Illustrated with about five hundred original photographic reproductions and colored plates. Cloth. Second Edition. W. B. Saunders Co., Phila. and London.

The cordial reception that has been given to the past editions of this book indicates that there is a distinct field of usefulness for works on surgical diagnosis. The present volume is considerably larger than the previous edition and shows evidence of careful revision. The chapter on surgical affections of the skull and brain contains much that is new and valuable, and it is exceedingly well written. The same can be said of the discussion of surgical diseases of the abdomen, and of the diagnosis of renal affections. Everything commendatory that has been said of this work can be repeated for the present edition.

JONES.

The Medical Epitome Series—Hygiene and Public Health. By George M. Price, M. D., Author of A Handbook on Sanitation, Tenement-House Inspection; Inspector N. Y. State Tenement Commission; Medical Sanitary Inspector, N. Y. Department of Health. Series edited by Victor C. Pedersen, A. M., M. D. Pp. 253. Cloth. Lea & Febiger, Philadelphia and New York.

This little treatise covers an immense deal of matter and in the most practical manner. The following subjects may give one an idea of its scope: housing hygiene, school hygiene, industrial hygiene, public water supply, food supply, milk supply, disposal of waste matter, public nuisances, prevention of infectious diseases, federal hygiene and sanitary inspection. It is almost unbelievable that so much information could be crowded into so little space.

The information is all detailed, even to the special patterns of water closets desirable. Of course only the essentials of each subject are considered, but this requires all the more skill. In the latter chapter are directions and score cards for use by the sanitary inspector in the various departments previously described.

WINSLOW.

Case Histories in Pediatrics. A collection of Histories of Actual Patients Selected to Illustrate the Diagnosis, Prognosis and Treatment of the Most Important Diseases of Infancy and Childhood. By John Lovett Morse, Assistant Professor of Pediatrics, Harvard Medical School; Associate Visiting Physician at the Infants' Hospital and Children's Hospital, Boston. Cloth. 314 pp. $3.00. W. M. Leonard, Publisher, Boston.

This means of giving instruction in pediatrics is a distinct success. The author has selected about one hundred cases from his own experience which best illustrate the commoner diseases of infancy and childhood. These cases are presented in a clear, accurate, virile manner, calculated to stimulate and guide the reader's thought. There are no ambiguities or superfluities. The index makes the book's material easily available. The field of usefulness of such a book is large. In the class room, to the undergraduates; in post-graduate work; medical clubs, and in the reading of the busy doctor in practice this work will be full of helpful suggestions. As John Lovett Morse is one of the most progressive and original pediatrists in the country and is unquestionably one of the leaders in his specialty, this book will receive wide recognition and circulation.

MANNING.

A Manual of Obstetrics. By A. F. A. King, M. D., Professor of Obstetrics and Diseases of Women in the Medical Department of the George Washington University, Washington, D. C., and in the Medical Department of the University of Vermont, etc. Eleventh edition, enlarged and thoroughly revised. 12 mo., 713 Pp, with 341 illustrations and three colored plates. Cloth, $2.75 net. Lea & Febiger, Philadelphia and New York, 1910.

This is a very popular book, and deservedly so on account of its clearness and conciseness of expression. It stands midway between the book on "Essentials," quiz compend, and the 1,000 page system, and is a truly valuable text-book for practitioners and students. In this edition, among new matter, may be mentioned the subjects of pubiotomy, spontaneous version by posture and by thigh pressure of the patient in the squatting position. The section of hyperemesis has been rewritten and thirty-seven new figures have been added to the illustrations.

WINSLOW.

The Care and Training of Children. By Le Grand Kerr, M. D., Author of Diagnosis of Diseases of Children; the Baby, Its Care and Development; Professor of Diseases of Children in the Brooklyn Post-Graduate Medical School, etc., etc. Cloth. 233 Pp. 75c net; by mail 82c. Funk & Wagnalls Co., New York and London.

Like the author's book, "The Baby," this is distinctly practical and deals with the care and training of children in language adapted to the parents. The early chapters on clothing, diet, sleep, bowels, etc., are handled much as are those on these subjects in most of our text-books. The later chapters, however, on "relation of parent to child, government of the child, punishment and moral failings," give more consideration to the psychology of the child than our text-books on pediatrics. Such a book cannot fail to be of service to those entrusted with the early training of children.

MANNING.

Dawn of the Fourth Era in Surgery and Other Short Articles.—By Robert T. Morris, M. D., Professor of Surgery, New York Post-Graduate Medical School and Hospital. 12mo. of 145 pages. Philadelphia and London. W. B. Saunders Company. 1910. Artistically bound. $1.25 net.

Morris is a brilliant and original operator, a forceful thinker and writer, and the reading of his cerebral emanations is far from dull. In this book one finds a series of articles embodying his recent thoughts and acts in the realm of surgery. With many of these the insurgent surgeon will agree, such as disturbing natural processes as little as may be in opening the belly in acute infection; the quick "getting in and out;" the avoidance of large packings and incisions; the value of rapidity and simplicity in operating. Morris' armamentarium consists, as is well known to the profession, of a pair of scissors, two artery forceps, a small retractor and a needle for much of his surgical work. His treatment of wounds by gentle washing with normal salt solution and covering of smooth, protective membrane instead of gauze is beyond cavil and reproach. But his palpation of the appendix through the abdominal wall so as to determine its length, breadth and thickness to the point of stating its dimensions in quarter inches, his diagnosis of "gall spider," his differential diagnosis based on tenderness of the right and left lumbar ganglia can hardly be ingested intact by the profession without some after-pains and unfortunate sequelae. Personally we have cause to sorrow over placing too much reliance on these **pathognomorris** signs.

The author's mode of expression is unusually happy, picturesque and enlivening. We submit the following Morrisiana for your delectation: "There are cobwebs in the attic of the abdomen." "The hand of iron in the glove of rubber." "Let us not commit taxidermy on valued citizens" (apropos of gauze packing). "There are hieroglyphics on the peritoneum of Darkest Abdomen." Judge if the book is not worth reading and owning.

WINSLOW.

Salvarsan, ("606"); Its Chemistry, Pharmacy and Therapeutics.—By W. Harrison Martindale, Ph. D., F. B. S., and W. Wynn Westcott M. B., D. P. H. Cloth. Pp. 77. $1.50. Paul B. Hoeber, 69 East Fifty-ninth Street, New York. 1911.

This little book of about sixty pages is the first on the subject of "606" that we have seen in English. It contains a comprehensive resume of the literature to date, the extracts being taken from the writings of men of many nationalities. As a concise, unbiased digest of the subject to date it is invaluable. There is a list of 130 references.

REDON.

A Text Book on the Therapeutic Action of Light.—Including the Rho Rays and Violet Rays, Electric Arc Light and the Cabinet Light.—By G. E. Rogers, M. D., formerly Demonstrator in Anatomy, University of New York City. With Original Illustrations. Cloth. 323 Pp. Published by the Author; Chicago, Ill.

This is a manual of some three hundred odd pages that is hardly more than a solicitation to the profession to interest themselves in a special apparatus, at the same time condemning all other means and methods employed in a branch of medical science that has many enthusiastic adherents and an interesting literature. The work is not of a class that merits a review in an ethical medical publication or would be an addition to a physician's library.

CLOSSON.

NORTHWEST MEDICINE

The Journal of the State Medical Associations of Oregon, Washington, Idaho and Utah

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DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF THE PACIFIC NORTHWEST
Subscription Price $2.00. In clubs of twenty or more $1.00.

Entered March 14, 1903, at Post Office, Seattle, Wash., as Second Class Matter, under Act of Congress of March 3, 1879.

VOL. III. New Series. APRIL, 1911 No. 4

ORIGINAL CONTRIBUTIONS

NEURASTHENIA GASTRICA OR NERVOUS DYSPEPSIA OF LEUBE.*

By Alfred A. Robinson, A. B., M. D.
OGDEN, UTAH.

While the various organs and tissues of the human system possess a certain individuality in the performance of their respective physiologic acts, still the coordination, regulation and functional mechanisms are dependent upon the nervous system. The involuntary movements are normally under central control but in many cases may go on in the absence of central connection. Just what the nerve impulse actually consists of, whether it be a wave of molecular or chemical change we do not know, but its results may be manifested in muscular, glandular or sensory phenomena. A functional error may be brought about by the perpetuation of excessive stimuli, by the lack of nerve excitability or conduction, or by a perversion of nervous energy.

Briefly reviewing the nervous anatomy and physiology of the stomach, we find that the anterior surface is supplied by the left vagus, while the posterior surface receives about one-third of the fibers of the right vagus. The sympathetic system is connected with the stomach by branches from the celiac plexus. These anastomose with the vagi, and together with numerous ganglia form a finely-woven network in the submucosa.

The motor nerves of the stomach are supplied by the pneumogastric. Vomiting, sobbing and other gastric movements depend upon the motor filaments of these nerves. It has been demonstrated that the vagi are also the secretory nerves, but the stomach itself possesses some secretory power independently of the pneumogastric and sympathetic nerves. The vagi also convey the sensation of hunger.

It is not, however, the anatomy of the stomach which concerns us in neurasthenia gastrica, but rather the great variability in the reaction to impressions in different individuals and a more complicated mechanism of the central nervous system. Individuals of a neurotic or hysterical type respond to the slightest stimulation considerably quicker, much more intensely (and occasionally by very unusual reflex acts) than a person with a sound nervous constitution. When we stop to consider the sudden changes which take place in gastric mechanisms upon emotionality, such as anorexia from excitement, vomiting from visual impressions, etc., it can be readily conceived why, in neuropathic individuals, the stomach is often the favorite seat of functional disorders.

Neurasthenia gastrica is described as a combined gastric neurosis, in which the sensory disturbances (subjective symptoms) are the most prominent. This neurosis was originally described by Leube as a disorder of the stomach, characterized by a variety of distressing subjective symptoms during the act of digestion, but in which it is normal as regards time and chemism. Ewald and others equally competent maintain that it is but a local manifestation of neurasthenia. Leube has more recently, however, extended his definition to cover other forms, so we now include under this caption secretory and at times even motor disturbances.

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*Read before the Sixteenth Annual Meeting of the Utah State Medical Association, Salt Lake City, Utah, Oct. 3-4, 1910.

The predisposing elements which enter into the etiology of this affliction are manifold. The disease is said to occur more frequently in men than in women, and while it may occur at any age, it is most commonly found between the ages of thirty and fifty. The cases are met with most frequently in persons who have inherited an unstable nervous constitution or who have been subjected to indiscretions which have brought about a general nervous breakdown. Mental overwork, especially hurried nervous activity such as bankers and brokers are subjected to, are common causes. Emotional depression from death, failure, responsibility and the like, as well as the various phobias, form a large group of factors. Constitutional diseases of debilitating nature should also be named. Here we may mention tuberculosis, anemia, chlorosis, malaria and influenza. Persons who suffer from chronic constipation may become victims to the malady.

Sometimes the cause is of reflex origin, dependent upon organic disturbances in remote parts. A large group of causative factors are diseases of the sexual organs. Men with prostatorrhea, spermatorrhea, phosphaturia or those who indulge in sexual perversions and coitus interruptus, as well as women with chronic pelvic ailments, are fit subjects for this disease. The abuse of alcohol and tobacco are also considered causes. It is claimed by Kemp that neurasthenia gastrica may occasionally appear as a definite independent neurosis.

The direct cause of the disease seems to be due to a condition of unstable equilibrium of the sympathetic nervous system, aggravated by the above mentioned disturbances. Since the sympathetic nerves are in such intimate relationship with all the organs of the system, and the abdominal branches of the sympathetic (the splanchnics) furnish a supply to the vascular as well as the muscular structure of the stomach, any organ being thrown out of cooperate harmony may bring about sufficient instability of the sympathetic system to cause this gastric neurosis. This would seem to bear out the idea of Ewald. i. e., it is but a local manifestation of a general nervous condition, and that Auerbach's plexus is not alone the seat of disturbance.

So far as investigation of this disease has gone, no pathologico-anatomic basis has been discovered. In fact, it is necessary to exclude everything of an organic nature in the stomach before one is justified in pronouncing the symptom-complex a neurosis. The disorder is one of function and not of structure.

The types of patients who suffer from nervous dyspepsia vary widely from emaciated, skeleton-like figures to well-nourished, healthy-looking individuals.

Usually, the general symptoms of neurasthenia are prominent, although in some cases the stomach symptoms are so conspicuous that the neuropathic character of the patient escapes notice. The subjective symptoms begin after meals by a sense of fulness and pressure in the epigastrium. This is often interpreted as pain and magnified by the imagination so that the examiner may be misled. The character of the food seems to make but little difference in the severity of distress. At times it follows the ingestion of light, easily digested foods, while again no discomfort is complained of after eating a heavy, indigestible meal.

Loss of, or an irregular appetite is the rule. The patient may complain of a feeling of depression, insomnia, palpitation, dizziness, headache, lassitude as well as other disturbances of neurasthenia. As the disease is dependent upon the condition of the nervous system, the surroundings and general mood of the patient have a marked influence on the symptoms.

Additional findings are distention of the epigastrium and eructations of gas, which are at times painful. Regurgitation may occur but actual vomiting is said to not happen. Thirst is variable, the tongue is usually clean but the bowels are, as a rule, constipated. Circumscribed points, sensitive to pressure, have been described as diagnostic. These are near the umbilicus, especially to the left, and below the ensisternum. Ewald has, however, demonstrated cases in which no such points were found.

Upon turning to the gastric analysis we find that the picture is by no means characteristic. There are usually variations in the stomach contents in the same individual which, it would seem, are peculiar to nervous dyspepsia. There may be a hyperacidity but more frequently a diminished acidity is found. Free hydrochloric acid may be entirely absent and it is said that gastric ferments are always present.

The motor functions are usually undisturbed. A fasting stomach is generally empty; and seven hours after the Riegel's test-dinner (a) no remnants are to be found. The Boas-Ewald (b) test-breakfast is well digested an hour after the meal is taken.

Before a diagnosis of neurasthenia gastrica is arrived at it is necessary to exclude all organic lesions of the stomach as well as ptosis of the viscera, and the stomach must occupy the normal position. Only after prolonged observation and repeated examinations can one be positive as to diagnosis.

(a) Riegel's test-dinner: One plate of meat broth (400 cc.), beefsteak (150 to 200 gm.), mashed potatoes (50 gm.) and one roll (35 gm.)

(b) Boas-Ewald test-breakfast: One or two rolls and one cup of tea or water. Examine one hour after ingested.

The presence of general nervous symptoms in a patient suffering from gastric distress after eating should suggest this affection. The variations in the stomach secretions upon different examinations, without the evidence of organic disease of the organ; the fact that the character of the food, whether digestible or indigestible, seems to make little difference; and the amelioration of the symptoms upon the mental improvement, all point to nervous dyspepsia.

Other affections of the stomach that may have to be differentiated from this are ulcer, cancer, chronic gastritis, perigastritis and anemic gastroptotic dyspepsia.

In ulcer there is paroxysmal pain, usually aggravated by taking food. This pain is violent in the epigastrium and passes to the back on a level with the eighth to the ninth thoracic vertebrae. Tenderness upon abdominal pressure can be elicited. Vomiting frequently occurs about two hours after eating and the vomited matter contains much hydrochloric acid. Hematemesis is an important confirmation.

The symptoms of cancer usually come on with indigestion and physical weakness. The patient has a persistent dragging pain which is increased upon eating and pressure. Vomiting is frequent and may be "coffee-ground." Hydrochloric acid is absent and lactic acid and Oppler-Boaz bacilli are generally present. Progressive emaciation, the diminution of red blood cells and hemoglobin and the development of a tumor serve to confirm the suspicion.

In chronic gastrititis errors of diet greatly aggravate the condition and the symptoms are qute constant. As a rule, hydrochloric acid is greatly reduced and may be absent. Considerable quantity of mucus is found in the gastric contents.

Perigastritis is one of the sequelae of ulcer but may lead to confusion in diagnosis. The history is important and discomforts of the patient depend largely upon the physical activity, and are not influenced by the condition of the nervous system.

Anemic gastroptotic dyspepsia occurs in anemic and very poorly-nourished individuals. The distress appears shortly after taking food. Symptoms are variable and persist unchanged for years, disappearing only upon improvement of the general hygienic conditions. The nervous system does not influence the symptoms.

The course of the disease is dependent upon the disturbing factors. If these can be eliminated, the symptoms soon disappear. If mental improvement in the patient can be accomplished, favorable results are produced in a few days. On the other hand, relapses come with even greater rapidity under mental aggravation.

Nervous dyspepsia scarcely ever progresses into organic disease. The sequelae depend chiefly upon malnutrition. These may be severe anemia, tuberculosis, intestinal catarrh, chronic constipation, hypochondriasis, etc.

The physician who falls victim to one of these patients soon discovers that no specific remedy is within his reach. Really the ideal place to handle them is a sanitarium. The treatment for those who are unable to take this retreat may be summed up under the heads: general conditions, dietetics, psychotherapy, hydro-therapy, electro-therapy and medicinal agents.

As the disease is but a local manifestation of a general neurosis, treatment should be directed to the improvement of the general condition. In the first place all unpleasant excitants in the surroundings should be removed. Complete rest from work is very important. Reflex irritants should be sought for and remedied if existing. A change of scenes for a few weeks, such as camp life, fishing, hunting or the like, is very beneficial.

The diet to be advised depends entirely upon the condition of the patient. If malnutrition be an associated condition, forced feeding should be undertaken. Severe cases of malnutrition may require the Weir-Mitchell rest-cure. On the other hand, if the patient be well nourished, forced feeding is not indicated. If constipation exists a diet suitable for that condition should be given.

The patient should be assured that no serious stomach affection exists but that the nerves supplying the stomach are causing the trouble. Personal trust and confidence in the physician's assurance of improvement are important. Coenheim has secured remarkable results in the more susceptible patients by treating with electricity and effleurage over the epigastrium, suggesting that the magnetic treatment has great curative powers.

Cold water procedures should be advised against. Anemic patients should receive lukewarm full baths. Light massage of the body and friction applied to the epigastrium are productive of good results.

Electricity is beneficial, aside from the psychic aspect, in many cases of nervous dyspepsia. Patients with irritable nervous systems should receive the galvanic current but the faradic is indieated in relaxed patients. One electrode is placed on the back and the other on the epigastrium. Cohenheim advises endofaradization by means of the stomach electrode or a copper wire passed through an ordinary stomach tube which is closed at the upper end by a cork. Rockwell uses general faradization by placing the bare feet on one electrode, passing tho other over the body.

Various medicinal agents, such as iron, arsenic, nux vomica, glycerophosphates, etc., to treat the general systemic condition, are frequently necessary. These are especially useful in patients with malnutrition and anemia.

For the general nervous condition, as well as for the local irritation, perhaps the most valuable sedatives in these cases are the bromides. Strontium bromide is well tolerated and may be given in large doses. This is especially good where an excessive acidity exists, as it renders the stomach contents less acid as well as exercises a sedative effect upon the irritable nervous system.

From my personal experience with these nervous stomachs I have found the most useful remedy to be chloretone. The drug is decidedly a nervous sedative; it is non-cumulative and is free from any untoward effects. If large doses be given, however, drowsiness ensues. The dose used is two or three grains. It exercises a sedative or anesthetic effect upon the nerves of the gastric mucosa and promptly relieves the distress. Gaseous distention often requires attention and unless fermentation is reduced chloretone fails to secure the desired comfort for the patient. In these cases I am accustomed to adding four grains of resorcinol to each capsule of chloretone, which serves nicely to reduce this disturbance. The capsule is given fifteen minutes before each meal.

Remedies to assist digestion are generally quite unnecessary. When the nervous equilibrium is restored and the disturbing factors are removed the stomach, which has been a vicarious sufferer, resumes again its normal functions.

Report of Cases.

Case 1. Female, age 30, family history negative. Married about 10 years. No children. Menstruation irregular and painful. Home life pleasant, but husband's mother thinks she should do more work. Has had "stomach trouble" about four years. Complains of loss of appetite, pain in the epigastrium and nausea after eating, character of food makes little difference in symptoms. Bowels are constipated. Is hysterical and will cry when describing her symptoms.

Examination showed rather poorly nourished condition, patellar reflexes exaggerated, hypersensitiveness of the pelvic organs and tenderness at the tip of the ensisternum.

She was given two drachms of liq. strontium bromide (Chapoteaut) before each meal and at bed time, which gave great relief. This improvement, however, lasted only about ten days when she returned for further advice. She was then advised to go to a well-known Pacific Coast sanitarium, which she did. There a diagnosis of neurasthenia was made and the physician in charge wrote me, "Her stomach disturbance is only symptomatic of the nervous trouble." At this institution she made great improvement and came home after a few weeks a new woman.

Case 2. Male, age 41. Decorator and sign painter. Nervousness dated from domestic incompatibility about six months previous to first consultation. Used alcoholics, but not abusively. Manifested several peculiarities of neurasthenia, unharmonious combinations of colors or musical discords were so depressing that he would cry. He complained of a constant distress in the epigastrium. This was made worse by eating. Experienced severe pain in the stomach upon being awakened from a sound sleep. Gaseous eructations annoyed him.

The body was well nourished and subcutaneous fat was abundant. He claimed to have lost twenty pounds, however. Considerable tympany over the stomach area seemed constant. Slight tenderness was elicited midway between the umbilicus and ensisternum. Gastric analysis showed a total acidity of 11 per cent., free hydrochloric acid .06 per cent., and absence of lactic acid.

A temporary change of occupation was advised as he felt that he could not take a complete rest. He secured employment as motorman on a street car. The use of alcohol and tobacco was refrained from and a diet slip giving list of foods to be eaten was adhered to. He took a daily warm bath at bed time and was given a capsule containing two grains of chloretone and three grains of resorcinol one-half hour before each meal. Rapid improvement was noted and in six weeks he was entirely free from any annoyance with the stomach.

Case 3. Male, bookkeeper, age 35. For three years has had dyspepsia. In that time weight has been reduced from 170 to 140. The stomach trouble seems to be decidedly periodical, the patient suffering an attack each month. Upon noting carefully the part of the month, I found the time to be about the latter part when overwork required additional nervous energy.

Patient complains of a fulness in the epigastrium, great distress after each meal, eructations of gas, anorexia and constipation. Is very irritable during these attacks.

Owing to responsibility, he has been unwilling to take a rest or change. Analysis of stomach contents during two different attacks showed total absence of hydrochloric acid and presence of lactic acid. Some benefit has been derived from strontium bromide. Chloretone serves to reduce the distress during an attack. No cure has yet been effected, as he seems unwilling to forsake the causes.

2447 Washington Avenue.

DISCUSSION.

R. L. Gillespie, Portland, Ore.: The disease mentioned is sometimes the bane of the general practitioner. The reason is, as mentioned in the doctor's paper, that the correct condition and the solution of it has not been arrived at. We have in general neurasthenic conditions, outside of those spoken of in the paper, a large percentage of stomach disturbances which are attributable, if an analysis be made, to some condition of the stomach itself, and precedes the neurasthenic stage by from six months to twelve years. In 157 cases analyzed by Proctor, of London, there were 122 that manifested some stomach disturbance, and 78 of those were laid down by him as a factor in the production of the neurasthenic state. The others were associated with the neurasthenic condition, and were types of the disease spoken of in the paper. One prominent fact that the doctor did not emphasize sufficiently as to the symptomatology is the varied array of symptoms these patients present relative to their stomach disorders. The pain is not regular. It does not always come on after a meal, but may come before. It may not be produced by indigestible food, but from the lightest and mildest of foods. It is the irregular character of the symptoms produced as to time that we should take particular notice of in these cases, and govern ourselves accordingly.

Dr. Frederick Clift: I agree with the remarks of Dr. Gillespie regarding this condition. We all know that stomach disturbance is responsible for the neurasthenic state in the majority of cases which come to us. We know how worry will affect digestion which does not proceed in the ordinary manner and, as a result, we find that nine times out of ten digestive trouble is only one of the symptoms of the neurasthenic state.

Dr. Joyce: There is one point in the differential diagnosis which seems to warrant discussion of the case eminently necessary. Recently I have had three cases that had long been treated by other men for nervous dyspepsia. Analysis had shown nothing wrong organically. The patients were reasonably well nourished, under weight simply from not eating for fear of the pain which was to follow. They always complained of more or less sharp, colicky pains after eating, particularly after a heavy meal. In all three cases a thorough examination disclosed slight, incomplete hernia, not enough to be a complete rupture. There was griping pain when peristalsis began in the course of digestion, and the gut would slip into the internal ring. One had been treated by a very thorough and very able man for over a year for these pains. A very slight truss kept the internal ring closed and permanently stopped the nervous dyspepsia, as the diagnosis had been made.

Dr. Robinson, in closing: Dr. Gillespie spoke of the discomforts before eating, which is something I neglected. They may be before or after eating, but as a rule it is worse after eating. Dr. Joyce's differential diagnosis point is an important thing and interesting. No matter how competent a man may be, on making a stomach analysis he might fail to deduct this deviation from ordinary experience. But stomach analysis is of very little value in these cases, for you may find that a patient has perhaps normal acidity.

THE PRINCIPLES OF CHEMO-THERAPY, AND THE RELATION OF THE WASSERMANN REACTION TO SYPHILIS.*

By Ray W. Matson, M. D.
PORTLAND, ORE.

According to Ehrlich two methods exist for the specific treatment of disease; namely, (1) Immune-therapy, by means of antibodies which are directed against the organisms themselves, and ideal because no harmful influence is exerted upon the body cells; (2) Chemo-therapy, by means of chemicals. It has been shown that in a certain class of diseases caused by protozoa, namely, malaria, sleeping sickness, syphilis, tick-fever, trypanosomiasis, etc., sufficient antibody formation cannot be brought about and a recovery in man depends upon the destruction of the parasites by chemical substances.

To be sure, the cure of diseases by this means has long been recognized and used in malaria and syphilis. But to Ehrlich is due the credit for having created chemo-therapy. Years ago, while yet a student in his third semester, during a lecture on lead poisoning, he conceived the idea that the way and means by which drugs are distributed throughout the body must be of the greatest significance for rational therapy. The idea so impressed him that in order to investigate the matter more thoroughly he was drawn away from the ordinary course of studies.

From his hemotologic studies he determined the affinity of the various cell elements to certain dyes and enabled us to differentiate the various forms of leucocytes because of their specific staining properties. He developed the principles of specific staining and demonstrated the selective action of many substances for different parts of the body. In his experiments in vital staining, he showed that, if methylene blue be injected directly into the circulation, the tissues of the nervous system will be the only ones colored. In this connection he discovered that those body cells which require the most oxygen were not colored in vivo, but turned blue upon exposure to air; thus he determined that the capacity of the body cells for reduction was a fundamental property of living protoplasm. This discovery gave him unlooked for information regarding the influence of chemicals upon processes taking place within the animal.

Continuing further, he found that by feeding animals (mice) with ricin and abrin, an immunity could be developed to these poisons.

Ehrlich's discoveries in chemo-therapy are the climax of all his work, embracing as it does a lifetime spent in research. Ehrlich believed that for each parasitic disease a specific drug must and could be found. Also, that unless the drug can combine with the parasite it cannot kill it. Such drugs he designated parasitotrophic, but since all chemical substances are poisons and unlike antibodies, they attack the vital organs as well, and in doses sufficient to exercise a bactericidal effect often do great harm, such drugs are called organotrophic. The task, therefore, of chemo-therapy has been to prepare an indefinite number of chemical combinations to be tested upon animals afflicted with parasitic diseases and select those which exert the highest poisonous or destructive effect upon the parasite, and the least possible injury to the host's body cells. In other words. the parasitotrophic action must be high and the organotrophic effect low, if the drugs are to be of any practical use.

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*Read before the Spokane County Medical Society, Spokane, Feb. 22, 1911.

From the thousands of drugs used it was found that those which exert a curative influence fell into three groups. (1) Group of arsenicals, arsenious acid, atoxyl, and later the substitution products of arsenobenzol, viz., arsacetin and arsenophenalglycin, and finally, dioxydiamidoarsenobenzol, commonly known as "606."

(2) Certain azo stains, as trypan red, blue and violet.

(3) Certain basic tryphenylmethan stains, parafuschin, methyl violet, pyronin and others.

The next problem to be solved was how the drug became fixed to the cell, and for a solution Ehrlich began his study upon trypanosomiasis in mice, which led to the discovery of the so-called "drug-resistant" species. In Ehrlich's experiments with trypan red he absolutely cured every mouse infected with trypanosomata with a single injection, thus killing every parasite within the body and bringing about a complete "sterilization." He also found that, by injecting a dose slightly smaller than that necessary for complete sterilization, the trypanosomata entirely disappeared from the circulation for a period directly proportionate to the dose injected, after which they always returned. A reinjection was followed by the same phenomena, but the interval of time elapsing before a return of a parasite became steadily shorter, and, if the drug was reinjected many times, it finally became ineffective. In other words, the trypanosomata became immune, or as the Germans say "fest," to the effect of the drug. It was also found that this drug resistance could be transmitted through many generations of the parasite, which led to the logical conclusion that, for a complete eradication of a parasitic disease, the microorganisms should bs killed "en mass" by a single dose of the drug, constituting the so-called "therapia sterilisans magna" for, if repeated injections must be resorted to, there arises the danger of drug tolerance on the part of the parasite.

Experiments also proved that strains of trypanosomata can be grown to resist either of the group of drugs just mentioned; thus a species resistant to fuchsin is also resistant to other stains of this group but not, however, against the azo stains or arsenicals.

An exact study showed, furthermore, (for this those species resistant to atoxyl and arcetin proved the most suitable) that one must assume certain arrangements, "chemoceptors," which possess an avidity for certain chemical groups and are able to fix such to the cells. Ehrlich was able to prove that arsenic is taken up by the "arsenoceptor," which is able to unite trivalant arsenic (arsenic as in arsenous acid) with the cell. This drug resistance of trypanosomata to arsenic is not due to a disappearance of the arsenocepter but, owing to a chemical alteration, they have less affinity for the drug, and this explains why larger doses are necessary to kill drug resistant species since, because of their diminished avidity, their destruction can be accomplished only through an excess of arsenic, or by forcing the drug upon the parasite through another receptor, viz., "acetoceptor" (the action of arsenic in arsenophenylglycin is accomplished by fixing the acetic acid group of the drug to the acetoceptor of the parasite and introducing the drug in this manner).

Thus the problem confronting the chemotherapist is to find a chemoceptor through which the drug can be forced upon the parasite. Although trypan red possesses the power of killing trypanosomata in vivo, i. e., in the animal body, it had no effect whatever in vitro, i. e., in the test tube. It was also found that atoxyl, which causes a disappearance of trypanosomata from the circulation in persons suffering from sleeping sickness, possessed no effect upon the trypanosomata outside the body, in the test tube. In order to understand the reason for these two facts we must consider the possibilities of action of these chemicals.

(1) No effect in vitro, none in vivo. Here neither the body nor the parasite have chemoceptors which fit the drug, so that it is, therefore, neither parasitotrophic nor organotrophic.

(2) Marked effect in vitro, little or none in vivo. Methylene blue in a solution of one to six million is effective in the test tube against the spirilla of relapsing fever; used 500 times as strong it produces no effect in the animal body. This substance is so organotrophic (affinity for body cells), that in vivo none escapes to attack the parasites.

(3) The so-called indirect or paradoxical effect; nothing in vitro, good effect in vivo. Thus atoxyl even in very high dilutions does not act bactericidally upon parasites in vitro, but in vivo it acts destructively in a few hours. There are two explanations for the indirect effect.

(a) A drug inactive outside of the body is changed within the body into a very active substance. Thus Ehrlich has proved that atoxyl is reduced in vivo to paraaminophenylarsenic oxide, a compound which kills trypanosomata also in the test tube.

(b) The drug may have no destructive effect upon the parasite, but by altering the chromatin it prevents its propagation, and in this manner a race sterilization is brought about.

(4) Marked effect in vitro, even greater in vivo. Only a portion of the parasites are killed in vitro but in vivo the dead bodies of these microorganisms awake an active formation of antibodies which, in turn, assists the action of the drug in killing the remaining parasites.

From the significance and importance of the chemical extensions of phenylarsenic derivitives, Ehrlich was so impressed that the Speyer Haus was founded in order to carry on the work on a large scale, which culminated in the discovery of diamidodioxyarsenobenzol which was prepared chemicallly by Bertheim and studied in a biologic-therapeutic manner by Hata, the brilliant pupil of Kitasato, who soon found that the drug definitely cured chicken spirillosis in a dose 58 times smaller than the "dosis tolerata" or the largest dose that could be safely administered to an animal. The spirilla of relapsing fever were easily killed by a single injection. One-seventh of the "dosis tolerata" was sufficient to cure a rabbit experimentally infected with syphilis, the spirochaeta disappearing completely within twenty-four hours. Nichols used the preparation in frambesia and twenty-four hours after the injection spirochaeta could not be found and changes in the infected testicle disappeared after two or three days.

The results of animal experimentation seemed to fulfill Ehrlich's aim, namely, that of ridding an animal of its disease by a single injection, thereby causing a complete destruction of all its parasites, which treatment he designated "therapia sterilisans magna," and it was thought possible that the substance could be applied to man. Here, however, two conditions which are not to be reckoned with in animal experiments must be considered, namely, idiosyncrasy and hypersensibility. For the determination of the latter condition Ehrlich has recommended the application of arsenic in the strength intended for treatment, or arsacetin in a 10 per cent. solution locally to the eye or skin, as is practised in the Calmette and Pirquet tests respectively for the diagnosis of tuberculosis. Those cases reacting positively should be considered unsuitable for treatment. The frequency of occurrence of the aforementioned conditions would naturally determine the utility of any drug in man. These purely accidental and previously unrecognized factors made it necessary to abandon the use of arsacetin.

Realizing the disastrous consequences which marked the early tuberculin era, Ehrlich considered it his duty to place the new preparation in the hands of experts in widely distributed parts of the globe, where the preparation could be carefully and extensively tried upon thousands of patients before it was given to the profession in general.

To Prof. Conrad Alt is due the credit for having first used the drug on man, and two colleagues volunteered to receive the first doses, which, aside from being painful, left no ill effects, thus justifying its use upon patients. For this purpose 23 cases, mostly paretics, were selected, and each was injected with .3 gm. of the substance. Of 18 with positive Wassermann reactions, in two it completely disappeared. In two others it was greatly diminished, and in three cases it appreciably decreased.

Iverson, of St. Petersburg, reports extremely favorable results in relapsing fever. In 92 per cent. of his cases the patients were absolutely freed of their infection so that no relapse appeared, the spirochaeta disappearing from the blood within four to ten hours after the injection.

Salvarsan, 606, has now been given in more than 40,000 cases, and Prof. Ehrlich has data on more than 30,000 cases. The action of the drug, the indications and contradictions, the dose and the dangers are pretty well established, so that Ehrlich may rightly consider the first part of his long and tedious work completed.

The second part, that of determining the ability of 606 to effect a permanent cure of syphilis, is yet to be determined. In this respect the most valuable evidence has been gained from observations following the use of arsenophenylglycin dating from 1907. This preparation acts very similar to 606, except that it is much weaker. Of twelve cases of malignant syphilis, treated by Herxheimer with this preparation in 1907 and reexamined in December, 1909, three had remained free from symptoms. While the period is insufficient for an absolute opinion, yet two and one-half years passed during which these previously severe cases were free from symptoms and the Wassermann reaction has remained negative. Alt treated a number of tabetics with the same preparation and all of these lost their Wassermann reaction which was still absent one and one-half years later.

While these reports have not directly concerned 606, the favorable influence of this preparation can be drawn from a study of recent literature. Thus, Gennerich, of the Marine Hospital in Kiehl, succeeded in converting a positive to a negative reaction in all but three of 81 cases. Lange, Wechselmans' assistant, reports that in a series of 268 cases, 153 of which were Wassermann positive, became negative in four or five weeks. Neisser reports that in cases treated during the stage of the primary lesion, that only 10 per cent. presenting a positive Wassermann reaction became negative. The dose, however, was small, .4 gm.

More recently Ehrlich reports two cases which tend to prove the curable effect of 606. Many months ago both patients presented themselves with an initial lesion which promptly healed under the influence of a single injection of 606. Both cases, however, returned later with another initial lesion, but in an entirely different location upon the penis.

Wechselman, Lange, Iverson, and most observers who have used 606 are agreed that all patients who are treated with this preparation and observed for sufficient time ultimately present a negative reaction. It must, however, be borne in mind that the effect of the drug is directly dependent upon the susceptibility of the individual and the dose applied. Also, that for a control of the efficiency of the preparation and its ability to effect a permanent cure the Wassermann reaction supplies the most delicate evidence. In order to interpret this reaction correctly, we must first consider its significance.

(1) In suspected syphilis (untreated) a negative reaction during the first week of the primary sore is of no value, (reactive substances have not been formed in sufficient quantities to elicit the reaction).

A negative reaction in untreated cases after the third or fourth week of a primary sore, or in a case of suspected manifestations speaks strongly against syphilis, but should be repeated. Some malignant forms of syphilis may run their course, Wassermann negative, because there has been no attempt on the part of the infected organism to respond with antibody formation. The reaction is often absent in mild forms of infection and in latent cases, because an insufficient number of spirochaeta are present to elicit the necessary stimulus for the formation of reactive substances. In these cases the reaction may appear for the first time after a course of efficient treatment, but soon disappears and may remain absent. This is to be looked upon as a favorable sign, because it shows that the body has reacted to the substances liberated from the bodies of the killed spirochaeta.

A positive Wassermann reaction is a sign of syphilis which is active, irrespective of clinical manifestations; it may mean changes in the internal organs without recognizable external signs or symptoms. The test, however, in the presence of a negative history should be repeated as a matter of precaution against technical errors.

(2) Syphilis under treatment. We have been able to show that effective treatment will convert a positive into a negative reaction. (Many soldiers under treatment by mouth for two years showed a persistent positive reaction which was quickly converted to a negative by the hypodermic administration of mercury.) Aside from indicating the efficiency of treatment, a negative Wassermann reaction must not be looked upon with too much stress unless it be persistently so in the absence of treatment. The reaction usually disappears following an efficient course of treatment, but gradually recurs during the course of a few months. This was especially the case among the soldiers who, under treatment, were Wassermann negative and free from manifestations. A break in the treatment occurred during the period of the summer field maneuvers, and as a consequence many cases suffered relapses and the reaction reappeared. The relapse is often preceded by a return of the reaction.

A constant positive reaction in patients under treatment is of questionable value. However, if the treatment has been energetic and the patient has been faithful it is not to be looked upon with favor, as many of these patients are undoubtedly candidates for paresis and ataxia. We have often observed that, while the treatment has been energetic, the reaction has remained positive, this being especially the case in alcoholics. A disappearance of the reaction was also noted in the cases where the patient was persuaded to give up his intemperance.

When should a patient be considered cured? Certainly not until he has remained free from symptoms and has been Wassermann negative for many years. Our plan of observation has been carried out in the following manner: After a certain prescribed course of treatment we advise its complete suspension for one month, after which the blood is examined. If the reaction be positive the treatment is immediately resumed; if negative and manifestations are not present, examinations are made monthly and treatment is resumed upon a beginning recurrence of the reaction. (This applies only to cases which have had one or more years treatment, where the question of a cure is to be determined.) If the reaction remains absent, examination should be made monthly for the first year, every three months during the second year, every six months during the third year, and once in every year thereafter.

No sooner had Wassermann announced his method than workers began to modify and simplify his technic and place it within the reach of the general practitioner, so that at present we are confronted with no less than 30 or 40 modifications. We are strongly in favor of the original Wassermann technic. In our examination of the blood of 524 healthy persons we did not find a single positive reaction. In collaboration with Capt. M. A. Reasoner, Medical Corps, U. S. A., we examined the blood of 1000 soldiers stationed at Vancouver Barracks, and the infrequency of a positive reaction in the absence of syphilis was striking.

Especially worthy of mention is an incident which for a time was alarming, but furnished valuable information regarding the incubation period of syphilis. It happened that in a certain series of specimens we obtained nearly 50 per cent. positive reactions which was nearly ten times more than our usual percentage. The matter was satisfactorily explained when we were informed by Capt. Reasoner that the specimens examined were those of a company which had just returned from the Islands. During the homeward passage, a stop was made at Honolulu, at which time infection must have taken place, for the reason that those persons infected were under surveillance for many months thereafter and at the time of our examination presented manifestations. The appearance of the initial lesion in some cases were delayed even as long as 40 days.

Our examinations conducted in connection with Capt. Reasoner have been particularly valuable in that they have afforded us the opportunity of studying the blood of many persons before and for more than two years after infection under all forms of treatment. One case, who was Wassermann negative, suddenly presented a positive reaction and five days later developed his initial lesion.

In conclusion, it must be said (1) that the proper dose of 606 has not yet been determined, i. e., the amount necessary to facilitate a complete destruction of all spirochaetes, even if such be possible.

(2) That unless a complete sterilization is effected the danger of relapse is great.

(3) First dose should be large and as few reinjections as possible should be resorted to, thus avoiding the danger of drug tolerance and hypersensitiveness developing. Patients should not be led to believe that one dose of 606 will eradicate their disease, as it may lead to neglect of treatment, return to old habits, and the occurrence of serious sequelae. Unless a complete destruction of all spirochaete is accomplished, a few remaining organisms by proliferation may produce an early relapse or, what is even more dangerous, remain inactive for years.

(4) The treatment of syphilis should be controlled by the Wassermann reaction, and the patient should never be pronounced cured unless he has been without manifestations and his blood has been negative for at least two years.

(5) It would seem then that the most efficient plan of treatment would be first the intravenous injection of 606, followed at monthly intervals of one, two, or more intramuscular injections, and supplemented by the hypodermic administration of mercurials during the interval.

LABORATORY METHODS IN THE DIAGNOSIS OF SYPHILIS.*

By Clarence Snow, M. D.

SALT LAKE CITY, UTAH.

We are fond of saying that medicine has ceased to be entirely an art and has become a science. That transition has been largely brought about through the development of bacteriology and pathology, and not the least bequests of these subjects are many exact laboratory methods of diagnosis. There will never be a time when the laboratory methods can take the place of the older methods of the clinician. No method of diagnosis can replace careful clinical observations and inferences drawn from them. But after these methods have been applied, how often are we still undecided; how grateful are we for some exact method of settling our doubts. Unfortunately, almost all laboratory methods of diagnosis, as do all clinical methods for that matter, fail at times. When negative, they frequently mean nothing.

I hesitated when requested to speak for a few moments about the more recent methods of diagnosis of syphilis. I felt that the subject had become hackneyed, but the chairman of your committee pressed me so vigorously that I could not resist.

Probably no less than one hundred separate and distinct causes have been discovered for syphilis, each gaining a certain recognition and soon being forgotten. The agent had come to be looked upon as too illusive for our present methods of research, when Schaudin and Hoffman, in 1905, announced the discovery of the sprochaeta pallida, or as it is better known now, the triponema pallidum. Almost in a day, from all over the world, came reports of the discovery of this organism in all sorts of syphilitic tissue, from the primary sore to the placenta of the congenital syphilitic fetus. The medical world was literally taken by storm, and today almost all syphilographers give this organism as the etologic agent in syphilis.

Few men, and of these most notably Siegel and Sealing, of the Berlin Zoological Institute, question its etiologic position. The question is, however, not definitely settled and probably will not be until the organism can be grown in pure culture and Koch's laws fulfilled.

The case was similar with the bacillus of leprosy. It could not be grown on an artificial medium, nor could any animal be infected with the organism. Still its presence was universally regarded as necessary for a certain diagnosis of leprosy. The faith in its etiologic position has only recently been justified, since Duvall has grown the organism on cystogen agar, and has successfully infected Japanese dancing mice with his cultures. The case will probably be the same with the triponema pallidum. Proven or not, it has demonstrated its usefulness as a diagnostic sign.

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*Read before the Sixteenth Annual Meeting of the Utah State Medical Association, Salt Lake, Utah, Oct. 3-4, 1910.

Material for examination is best obtained from chancre or papule by cleansing with physiologic salt solution, curretting lightly with a scalpel if the lesion be closed, hemorrhage being avoided. A small amount of the serum that exudes is taken upon a platinum loop and cover glass smears made as thin as possible. The best preparations are obtained by passing once through a flame and staining twelve to twenty-four hours in Giemsa's stain. Satisfactory preparations can be made, however, by keeping the smears at 37° C., that is, in one's vest pocket for several hours and then placing in 10 per cent. silver nitrate in a white bottle, exposed to the diffuse sunlight for a few hours to five days; then washing in distilled water. The spirals are stained black.

A still simpler method is to mix a small amount of the serum with an equal amount of India ink—ordinary Higgins drawing ink will do—and examining a thin film. The organism stands out as a bright spiral on the dark background.

Probably the most convenient method is to examine the material at once with a Richert dark field illuminator, which can be attached to any microscopic stage. The finding of the typical spirals is by all regarded as making a doubtful diagnosis sure. This laboratory resource is available for any man with a good microscope.

So much is being written about the Wassermann test for syphilis that one can hardly read his journals intelligently without knowing something of it. The test is rather a laborious one and is at present not available for use outside of fairly well equipped laboratories. Still one feels that, even though he is not going to use it, he would like to know what the test is and on what basis it rests. The basis is indeed somewhat complicated and unless one has devoted himself to the subject, he is not likely to have a very clear notion about it. It is probable that many of you have not had time to go into the details of the test, and I therefore felt that a short account of it might not be without interest to you.

In order to get any understanding of the matter, it is necessary to recall some facts developed by Ehrlich and others in their studies of immunity. Ehrlich and Morganroth showed that if red blood cells (erythrocytes) of one animal be injected into an animal of another species, the serum of the second animal soon developed the power of dissolving erythrocytes like those injected, and further showed that the reaction, which is known as hemolysis, is specific, that is, erythrocytes of any animal of the same species would be hemolized but not those from any other. The same phenomenon holds for bacteria, as was shown first by Pfeifer. Further, if any proteid be injected into a living animal and later some of the serum of the animal be brought into contact with a solution of the proteid used, a precipitate at once forms. In all these cases there has been developed in the serum of the animal some substances which bring about these several reactions. They are called immune bodies, and are hemolysins, bacteriolysins and precipitins, respectively.

Now in the case of hemolysis and bacteriolysis, you will recall, there are two bodies involved, one present in all normal sera, the complement, the other developed during the process of immunization, the amboceptor. Complement is unstable, disappearing in a few days after serum is drawn, and being destroyed at once, if heated to 55° C. Amboceptor, on the other hand, is stable and resists heating to 55° C. When an immune serum, which has had its complement destroyed by heat, is mixed with a suspension of the erythrocytes, or of the bacteria used in the immunization, the amboceptor at once attaches itself to the erythrocytes or bacteria, but no change is visible. If now a normal, unheated serum be added, the complement which it contains in turn attaches itself to the unused combining group of the amboceptor, and as a result of this union the erythrocytes or bacteria are dissolved, and in the case of the erythrocytes the hemoglobin goes into solution and gives color to the entire mixture. For solution the presence of both amboceptor and complement is necessary.

Now, in the case of the unorganized proteid, the action of precipitin is independent of the presence of complement, for if an immune serum in which complement has been destroyed be mixed with a proteid used in the immunization, precipitation takes place. However, and this is the contribution of Borbet and Gengou, if a normal serum containing complement be now added to the mixture, it is found that the complement attaches itself to the precipitate and is no longer available. In other words, there is a fixation of complement, or, as is often said, there is a deviation of complement. Even if the solution of the proteid be of such dilution that the precipitate is no longer visible, the reaction of complement fixation still takes place. Now all of these foreign substances used in developing an immunity are known as antigens, while the substances developed, as a result of the reaction in the animal body, are of course, antibodies.

Another example of antigen and its antibody, with which we all are familiar, is that of diphtheria and tetanus toxins which are antigens, and their antitoxins, which are the corresponding antibodies. Any foreign substance, then, organized or unorganized, which, when introduced into an animal body, is capable of developing an immunity in that animal, is an antigen and the substance developed in the animal body as a result of the immunizing reaction, is an antibody.

Now, it has been long held that in the course of a syphilitic infection there is developed a specific immunity, and if this be the case, is there not developed a syphilitic antibody in the infected individual? If some method could be discovered by which the presence of this antibody could be recognized, a new and useful method of diagnosis would be added to our armamentarium.

At almost the same time Wassermann, Neisser and Bruck, working together, and Detre working independently, set themselves this problem and worked out the same solution, in what is known as the Wassermann test. Their idea was this: If a syphilitic antigen, that is, material rich in the syphilitic infecting agent, be brought into contact with a syphilitic antibody, that is, serum from the syphilitic individual, there will be a precipitation, or if not, there will be an invisible reaction, similar to that taking place in a very dilute solution of proteid antigen with its precipitin. If the reaction be invisible, then some means is necessary to prove that it has taken place. The question then suggests itself, is the Bordet-Gengou phenomenon repeated, that is, is added complement fixed in the presence of such reaction? If complement be fixed, it is easily demonstrated, and this could be used to prove whether the reaction is positive or negative.

A trial soon showed that complement is fixed. The whole test depends on these two things, first, mixing syphilitic antigen with the syphilitic serum containing syphilitic antibody, then adding a normal serum containing complement; and second, examining to find if a reaction has taken place between antigen and antibody with fixation of the added complement. To determine if complement has been fixed, an hemoolytic system is used, that is to say, red blood cells are mixed with a serum that has been immunized against them. The amboceptors in the serum at once attached themselves to the erythrocytes. In the presence of free complement the erythrocytes will be hemolized. If, then, this second mixture be added to the first and no hemolysis takes place, we know there is no free complement in the syphilitic antigen-antibody-complement mixture, and complement has been fixed and the reaction is positive. If, on the other hand, the erythrocytes are hemolyzed, we know that complement was not fixed, which is to say that the suspected serum contained no syphilitic antibody.

Such, in brief, is the rationale of the Wassermann test. Practically, in order that reliable results shall be obtained, it is necessary to standardize all of the elements entering into the reaction. If, for example, more complement be added to the antigen-antibody mixture than they are capable of fixing, there will be free complement left over to produce hemolysis, and a positive reaction would be indicated as negative. Indeed, the technical difficulties are many. Added to this, it is necessary to have an elaborate series of controls to make certain that all of the agents are active, but of these technical difficulties I shall not speak.

Of the test originally proposed, there have been many modifications, chiefly as to the source of the reagents used. Wassermann used as his antigen an extract of the organs of a syphilitic fetus, but it has been found that extract of many normal organs, for example, beef heart, acts quite as well. Noguchi, of the Rockefeller Institute, has recently simplified the procedure much by preserving his reagents in dried form in impregnated slips of filter paper, each containing a definite amount of reagent.

In the course of his work on the Wassermann reaction, Noguchi noticed that the syphilitic antibody was thrown down with the globulin of the cerebrospinal fluid or blood serum and at the same time noted that the globulin was much increased in syphilis. He has developed a method of indicating this increase, which is simple and so reliable that it promises to be of use as a diagnostic method.

By this method, one or two parts of cerebro-spinal fluid are mixed with five parts of 10 per cent. butyric acid solution and boiled. One part of normal sodium hydrate solution is then added, and again boiled. The presence of a granular precipitate which settles, leaving a clear supernatent fluid, indicates an increased globulin, and is a positive reaction. With blood serum it is necessary to throw down the globulin with nine parts of half-saturated ammonium sulphate solution. This in centrifugalized, decanted, the globule dissolved in ten parts of physiologic salt solution, mixed with equal parts of 10 per cent. butyric acid, and otherwise treated the same as spinal fluid. The results are comparable with those obtained by the Wassermann test.

The exact value of these tests is as yet to be determined, but we know enough of them already to be sure that they will be used much more in the future than they have been in the past, and it is to be hoped that it will be possible to still further simplify the Wassermann test so that it will be available for smaller laboratories.

606, ITS PLACE IN MEDICINE TODAY AND IN THE FUTURE.*

By G. S. Peterkin, M. D.,

SEATTLE, WASH.

The opinions I shall express and statements I shall make will be drawn, not so much from the literature on 606 and the knowledge gained by the use of this drug, but more especially from the knowledge that practical experience gives one who closely observes and treats the diseases of humanity. Anyone can read today in textbooks and current literature (shall I say medical?), the theory of a disease or treatment and present the same, but the physician who presents his personal experience and opinion before a local society of which he is a member, is for various reasons, some human and some scientific, more apt to create discussion.

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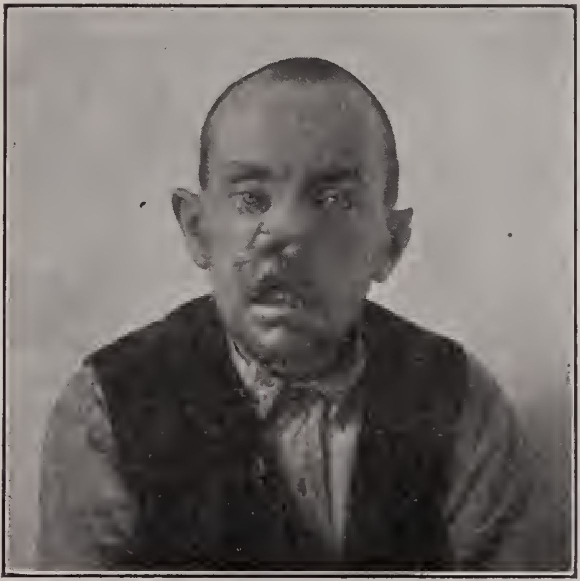
*Read before King County Medical Society, Seattle, Wash., Feb. 20,1911.


Case 2.

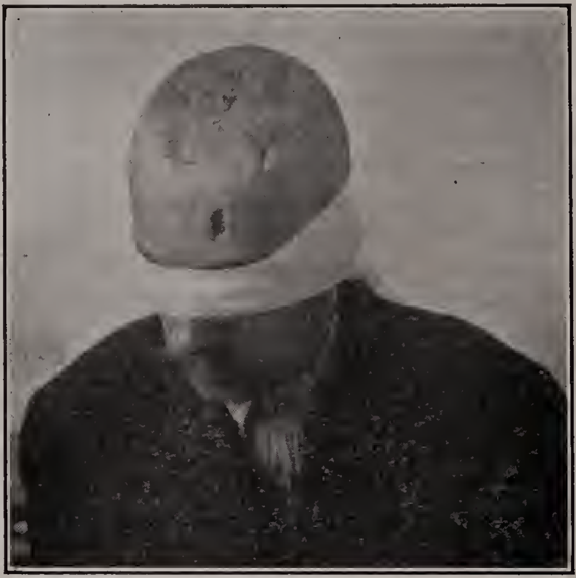
True science demands that we shall state things as they are and not as we would like to have them; therefore, that proper value may be placed upon my limited experience with 606, I shall briefly state the same.

My excuse for presenting this subject is its importance and the fact that, on Dec. 10, 1910, through the courtesy of Dr. Simon Flexner, of the Rockefeller Institute, I received the first doses of 606 that came to this city and was requested to administer them under the conditions then stipulated by its discoverer, Dr. Paul Ehrlich. I wish to thank the Seattle General Hospital and especially Miss Eveyln Hall, the superintendent, for courtesy extended; and also to thank Drs. L. H. Redon, H. J. Davidson, C. F. Davidson, Frederick Bentley and H. E. Coe for their able assistance in making the thorough physical examinations, laboratory tests, etc., required before and after administration of this drug.

On the evening of Dec. 26, 1910, at the Seattle General Hospital, four intramuscular injections (as advised) were given to the following selected cases:

Case 1. K., male, age 27, detective. Wassermann positive; no treatment; infected, Sept. 20, 1910. Dose, .5 gm. (intramuscularly). There existed macular eruptions and mucous patches, primary sore having disappeared.

Case 2. G., age 35, male, train dispatcher. Wassermann, positive. Quite consistent treatment; primary infection, 1905. Dose, .4 gm. (intramuscularly). Lesions tertiary; destruction of bridge of nose; hard and soft palate partly destroyed; pharyngeal wall and pillars thickened and infiltrated. Condition best illustrated by picture.


Case 3.

Case 3. W., age 32, laborer, infection, 1900. Wassermann positive, desultory treatment for 6 months only. Dose, .4 gm. (intramuscularly). Lesions tertiary; gumma broken down with mixed infection (staphylococci and streptococci). Results best illustrated by photograph.

Case 4. L., girl, age 11, hereditary syphilis. Irregular treatment. First manifested at six when lesion, as seen on forehead, appeared. Responded to skin grafting, after strong specific treatment. Lesions at time of injection 606, periosteitis, both tibia; nodules on ala of nose, right side, and also at the canthus of right eye.

The fifth tube was not administered because of faulty technic in preparation. To date all four cases show decided improvement.

Since that time I have administered the drug to 18 additional cases, classified as follows:

Locomotor ataxia 3, Cerebral syphilis 3, Primary with no medication 3, Secondary without lesions, but undergoing mercurial treatment 3, Hereditary syphilis 1, Tertiary syphilis with evident lesions 1, Tertiary, without lesions, undergoing treatment 4; Total 18.

In all cases thorough physical examinations were made; Wassermanns were taken previously and are on an average of three weeks now being taken. Mode of administration, intravenous 1, subcutaneous 2, intramuscular 15.

Briefly stated, this is my experience with 606. The question to be answered, however, is, "606, its place in medicine today and in the future." Details of cases will be omitted and generalities dealt with. In the history of the world I think no other drug has so universally stirred, not only the minds of the medical profession but of the laity as well, with the hope that the curative powers attributed to it are true.

Case 4.

The discovery of this drug is due to the combined work of Professor Paul Ehrlich, of Frankfurt am Main, and his assistant, Dr. Hatta, to whom mankind owes a great debt of gratitude. To Dr. Ehrlich comes a singular honor, unequalled in the history of medicine, that of first evolving a theory to explain a biologic phenomenon and, by working along those lines, producing practical results of great value. It was not a chance discovery. This being true, to employ the drug scientifically, logic demands that the theory upon which it is based be understood and that the treatment be carried out along these lines. Empiricism has no place here.

Although theory aided in introducing a new method of treatment, called "specific chemical therapy" or "biologic therapy" that 606 established, we are not for a minute to think, because using a specific drug that destroys microorganisms, that, when injected, this drug acts as an antiseptic, killing the microorganisms, for treponema pallida can live in a solution of 606. The drug, when administered, causes a reaction to take place in the host, whereby will be produced a substance, an antibody, as it were, which destroys the protozoa. Bacteriotropic and organotropic are terms used to explain the phenomena.

The steps of the experiment which engendered these terms were the bases of premises which led to the discovery of 606 and were due to the fact that Ehrlich recognized that certain dyes have specific action for all trypanozoa and not for the cells of the host or human organism. Noting this fact, he injected the solution into a living body and was surprised to find that this selective action of trypanumred still took place, but in doing so the trypanumred had power to kill, became trypanocidal, due to some action on this substance by the living cells or fluid of the host. Knowing this fact and that arsenic in its various forms is most efficient in treating all forms of trypanosomes, the next step was to evolve a drug in which the bacteriotropic power was great and the organotropic power small or nil. In other words, so treat a drug, a known poison to the human body—here arsenic—so that it would have an affinity for the trypanosomes, the infecting organisms in the human body, be bacteriotropic and kill the microorganisms and none for the human cells, be non-organotropic and not harm the human cells. By a process too intricate except for a scientific chemist to follow, atoxyl, introduced by Thomas in the Liverpool School of Tropical Medicine, was finally modified into dioxydiamidoarsenobenzol on the 606th trial, hence its name.

This drug is strongly bacteriotropic for the treponemum pallidum, little organotropic, i. e., has a selective power for the treponemum pallidum or spirochaete, but none or little for the cells of the human body—will not destroy the same. To illustrate, if .6 gm. of 606 be injected, which has the equivalent of about 3 grains of pure arsenic, an amount known to be fatally poisonous to the human host, no harm comes to the body cells. Through the fact that such large doses of this drug can be introduced into the human organism, kill the treponema pallida and yet not harm the host, the thought naturally arose that if a sufficiently large dose could be given at once so as to kill all the treponema pallida and yet not harm the host, syphilis, a disease of years, could be eradicated at once. The idealism, "Therapia sterilisans magna," would be a reality.

Thus the belief that one dose of the drug will cure syphilis has arisen and is an universal conception, one which will do much harm for the next year or two or possibly longer and will, undoubtedly, greatly lessen the benefits derived from its action. As one injection will cure in only a few selected cases, many patients will spread syphilis broadcast, thinking themselves free from the disease; therefore will not only infect others, but will bring their own health into jeopardy and there will be an increase of syphilis, not from prostitution, but from neglect of treatment.

The questions that I shall answer in the light of my knowledge, which at once came to my mind, as perhaps to yours, when we heard of the wonders of 606, were as follows:

(1) "Therapia sterilisans magna" a reality or an idealism?

(2) Will salvarsan, or 606, eradicate syphilis?

(3) Will it wholly take the place of mercury or the iodids?

(4) Will there be no longer need of knowledge, experience, judgment in selecting cases, varying the strength of drug according to individual patient or condition, etc.?

Has the art and science of medicine reached the millenium? A tube of salvarsan, a needle, a quick plunge and a reward of from $500 to $1000! I think not. There never has been nor will be a panacea for any one of humanity's ills, mental or physical, so long as nature gives men individualities which distinguish them, mentally and physically, one from another; therefore, salvarsan will be no panacea.

Again, no uniform dose of any medication, drug or serum given, will act the same on every individual; it varies not only with the individual, but with the same individual at different times. Will .6 gm. salvarsan, therefore, cure every case of syphilis? No. So in the hands of the general practitioner, "therapia sterilisans magna" is certainly an improbability and rare possibility; for science is not here in .6 gm. packages and today, as has been in the past and will be in the future, a physician's success in the treatment of syphilis will be in proportion to his knowledge, experience and judgment which tell him when, how and in what dosage he shall administer any drug, be it salvarsan or not, and the man who is the keenest observer and has the most experience and practical knowledge will secure the best results.

In justice to its discoverer, salvarsan is a wonderful drug; but in justice to science, I know not its power, only what .6 gm. dose will do. So do you. So our failures, of necessity, teach us nothing of the drug's efficiency.

Answering the question, "will salvarsan wholly take the place of mercury and iodids," the history of medicine shows that the action of any drug is not omnipotent in any one disease; therefore, salvarsan will not wholly substitute mercury and the iodids. Ehrlich, himself, states that these drugs can be used successfully in conjunction with 606 and a practical acknowledgement of this is the fact that the pharmists, who place salvarsan on the market and are usually looking only at the commercial aspect, admit in the pamphlets accompanying this drug that it can be used advantageously in conjunction with these two medicines.

In answer to the question, "will it eradicate syphilis in time," probably one of the principal values of salvarsan is its power to lessen the infectious period of syphilis, though all the credit must not be given to this drug, for this value would not exist were it not for the aids to early diagnosis, the dark stage, Indian ink stain for the spirochaete and the Wassermann test. That this drug will cure syphilis in one dose, in a few selected cases, is a possibility, but, as before stated, not a probability. That it has done so must be admitted, judging from reports of a number of competent observers and that it will, is a logical result of the theory upon which the drug's action is based; but to date, experience has not taught the exact character of these cases upon which such results are to be obtained and they have not been classified.

Let us now consider some facts about 606, of necessity, in a desultory manner: Is it a dangerous drug to administer?

No, in the sense that strychnin is not when used with discretion. I have given .6 gm. doses in every case, .8 gm. in two.

In what class of cases should the drug be employed?

In every acute case, as soon as the diagnosis is made in order, first, to lessen the infectious period of the disease, thus the spread of syphilis; second, to abort the disease, thus lessen period of treatment.

As one dose is not usually efficient, when should the medication be repeated? In my opinion, in six weeks, at the latest, if the Wassermann is not negative; or perhaps mercurial treatment should be instituted. This question I cannot, as yet, answer from extended experience; but literature shows that the drug has been repeated as many as eight times in one case. How frequently this drug should be repeated, as regarding length of time, in sufficient number of cases, is lacking. Its use and results attained in special cases, in skin lesions and in cases that have been habituated to mercury, etc., will be found and read, with better advantage, in literature of the day and will not be here discussed.

What after-symptoms shall we tell the patient to expect? In many (intramuscular injections) none, except a dull pain, providing the gluteal regions are well developed and the solution is not too alkaline, blood vessels not punctured nor the injections placed too near a large nerve or driven with force so as to bruise and impair the muscular structure. That the pain is aggravated in many cases is due to the fact that the bruised gluteal muscles are not given rest so that they may recover. A patient who receives an injection and remains in bed four days, possibly five, will have little trouble.

As to temperature, the average rise is up to 101°, but 102° is not unusual and cases have been reported showing temperature of 105.5°. This I have seen, myself, in a boy of twelve, a case of hereditary syphilis. The pulse does not vary much from normal. Patients usually eat well, feel well and at no time look sick, for the temperature is not that of a febrile disease.

It is interesting to note the gain in weight, the rate sometimes averaging a pound a day. Patients with tabes dorsalis seem to be insensible to the injection itself; however, their accustomed pains in the legs often appear after the injection. Urine sometimes contains albumin and the amount of urine is lessened.

The question arises, "if one dose does not cure, how are we to know when the dose is to be repeated?" By employing the serum test. This drug cannot be used scientifically nor in justice to a patient unless controlled by the serum reaction, be it the Wassermann or Noguchi.

That one negative test is not evidence of cure in a case undergoing treatment is patent. It is no more reasonable to suppose that it is than to consider that one test of urine is positive evidence of absence of nephritis. A negative Wassermann may only mean a temporary disappearance of the treponema from the lymphatics and vascular system, but it does not mean that spirochaete are not present in lesions of fibrous character but poorly supplied with blood.

As to time a negative reaction is to be expected after a dose of 606, it varies from three weeks to two months. A negative reaction obtained in the early stage of infection when the spirochaete have not yet invaded the system but are present in the local lesion, will often become positive after an injection of salvarsan.

A peculiarity of 606 which may be of commercial interest to the medical profession is that, if one dose of salvarsan cures a case of syphilis, the patient can readily contract this disease again, instead of becoming immune as he evidently does if the disease extends over a lengthy period. In other words, it takes its place with gonorrhea, as to frequency of the attack.

An advantage of this drug over mercury worthy of note is that it can be given to a nursing mother and the syphilitic child will become cured. In other words, direct medication of the infant is probably not necessary, so reports Dr. Carl Tager. Speaking of infants, comparatively small doses should be given children, especially infants with hereditary syphilis, not because of the danger of the drug itself, but because of the danger of producing such a large amount of toxin by the destruction of a large number of spirochaete that death will result from the toxin. Thus I could go on talking about many interesting facts concerning 606; but many points omitted, I hope, for that very reason, will be brought out in the discussion.

Too much honor cannot be paid the discoverer of this wonderful drug, but the future alone will tell of its position as a curative agent of syphilis, a disease of years' duration. It will be a most wonderful aid in the cure and eradication of syphilis. It will not completely substitute mercury or iodids; it will shorten the period and intensity of medication; it will sometimes abort the disease, especially when a very early diagnosis is made. All these results will be attained only when the physicians can use knowledge, experience, judgment and varying doses, in conjunction with laboratory aids to early diagnosis and the serum reaction as a control.

THE SIGNIFICANCE OF JAUNDICE IN GALLSTONES.*

By Frank Hinman, M. D.,
SPOKANE, WASH.

Jaundice, while only a symptom of disease, like albuminuria, has been, nevertheless, since the earliest times of unusual interest to both the clinician and the pathologist. Like diabetes and gout a clear explanation of its pathogenicity is peculiarly elusive. The story of the development of our present knowledge of jaundice is interesting.

From the ancients came the idea that jaundice was associated with some blood disorder but, like the immortal Pergamnian, they were prone to explain any disease as due to disorder of the blood so that this theory is merely an evidence of the prevailing mode of thought. True, this early doctrine was somewhat modified from time to time, notably by Boorehave and Morgagni, who considered jaundice as due to the suppression of the biliary secretion. But there was no scientific attempt at an explanation up to within one hundred years.

It was in 1809 that the true obstructive nature of jaundice was revealed when Saunders ligated the bileduct and was able to trace the lymphatics of the liver distended with bile to their entrance into the thoracic duct. And so Saunders theorized that "in certain morbid states the blood might have a bilious appearance independently of absorption of bile from the liver," but he believed this to be most unlikely and concluded that in practically every case of jaundice "bile must be secreted and carried into the blood vessels." And this is the view that has been held by most writers ever since, that jaundice is essentially obstructive in its nature.

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*Read before the Spokane Medical Society, Spokane, Wash., April, 1910.

But in 1858 Frerichs attacked this doctrine with another already hinted at by Saunders. He put the blame upon the blood which he thought normally took care of these pigments, but in jaundice somehow failed to oxidize the pigments discharged into it and the jaundice arose either from an increased absorption of bile into the blood or from a diminished ability of the blood to take care of that normally absorbed. These views Frerichs erected upon this important observation as a foundation, that bile pigments appear in the urine after the injection of bile salts into the blood.

Kühne, who confirmed this fact, used it, however, in support of a radically different theory of jaundice. For he found that, if he injected hemoglobin in place of bile salts, he still recovered bile pigments in the urine. He consequently regarded hemoglobin as the source of bile pigment and formulated the doctrine that any agent capable of liberating hemoglobin in excess in the blood would be capable of producing jaundice.

Kühne's important point was shortly added to, apparently, by the great Virchow finding hematoidin crystals around old blood extravasations and which were found to be identical with bilirubin. The natural conclusion was easily that jaundice could occur without the intervention of the liver; for hemoglobin produced bile pigments in the urine and hematoidin identical with bilirubin had been found where the liver could not possibly have formed it. And so Virchow suggested the term "hematogenous jaundice," but he himself soon came to believe a purely hematogenous origin of jaundice to be extremely improbable and this skepticism was soon fully justified.

In 1885-6 the transformation of hemoglobin into bile pigment was shown by Stern, Naunyn and Minkowski to be an important function of the liver cells. And so we come to our present ideas for which few facts have since been accumulated.

What do we know, then, at the present scientific age, relative to the pathogenicity of jaundice? We know that bile is constantly though somewhat intermittently excreted. We know that the abundant pigment of the bile is derived from the never-ceasing destruction of red blood corpuscles. It is hard to realize that these red cells have a life period of barely four short weeks, but such is the case. What becomes of them? We now know that they either die in the blood stream, their hemoglobin being dissolved out and carried to the liver, while the colorless shadows are broken up and dissolved in the blood plasma; or the cells are taken up by the phagocytic cells of the liver, spleen and certain endothelial cells of the lymph glands. The hemoglobin from these corpuscles is then absorbed through the hepatic capillaries and passed on to the liver cells proper which break it up. We are in ignorance of this breaking up process, but the result is that the iron-free portion of the hemoglobin is discharged into the bile capillaries as bilirubin and its derivatives.

What becomes of the iron containing portion is still a matter of conjecture. Some may be returned direct to the blood; some possibly passes into the lymph channels, and some may be discharged with the bile and be reabsorbed from the small intestines. This iron of the hemoglobin evidently is a valuable asset and is not easily parted with by the body economy. But as to the pigment moiety we know that any disturbance of its regular discharge through the bile leads to some grade of jaundice. We understand by this that this pigment, dammed back in the liver, accumulates there until it is discharged back into the blood capillaries and lymph vessels, by which it is carried both to other tissues of the body where it is dissolved, causing them to assume a bile stained appearance, and to the kidneys where it is excreated in the urine which normally in man never contains bile pigments.

These are the essential features of jaundice, the accompanying itching of the skin, slowing of the heart, hemorrhages, mental depression, etc., being subsidiary symptoms. This little we know but as to the different groups of jaundice authorities still differ. The majority regard all forms as essentially hepatogenous in origin.

We can, however, distinguish the following: First, obstructive jaundice, pure and simple, without primary blood destruction, as would follow any blocking that might occur in the bile tract at any point from the liver lobule down to Vater's papilla. Thus we have jaundice from congenital malformations in some part of this tract, from inflammatory swellings as in catarrhal jaundice, from growths within the passage, from enlarged lymph glands, new growths or inflammatory contractures, after gastric ulcer, pressing upon the bile ducts from without, from foreign bodies in the lumen as gallstones and parasites, or spasmodic stricture and such other causes.

Secondly, toxemic or, as Afanassiew calls it, hemohepatogenous jaundice, which follows a pronounced breaking up of red cells in the circulation. This disintegration overloads the liver cells so that they secrete a thick viscid bile which blocks the finer bile capillaries and the bile pigment then makes its way into the circulation. These cases are really obstructive and hepatogenous, though primarily due to some blood disturbances, as from toxins of severe infections, toluylenediamin and other drugs.

Another similar grade of jaundice is set up in acute yellow atrophy, Weil's disease, and in acute phosphorus poisoning, but here the toxins attack the liver cells and do not affect the blood, so that these cases belong essentially to the first group, though toxemic in nature. Again there are cases recorded of rapid jaundice following severe shock or nervous disturbances, whose etiology is purely a matter of conjecture.

Finally, there is a fifth condition of pigmentation of the skin which should not be confused with these others as it is not true jaundice, as we understand it. In this there is a discoloration of the tissues with urobilin derived from hemolysis of blood within the vessels, without any direct intervention of liver function. But whenever this hemolysis becomes intense, there results a disturbance of liver function from overstimulation and a toxemic jaundice follows. As you see, the subject is still far from being settled but, for general purposes and speaking etiologically, there are two main groups of jaundice, obstructive and toxemic.

In diseases of the biliary passages jaundice so frequently occurs that a proper understanding of its characteristics is essential. In this discussion we are to deal with surgical conditions, gallstones, and from a surgical standpoint jaundice always means an interference in bile drainage; is always obstructive. The conditions of biliary diseases, such as catarrhal jaundice and cirrhosis, acute yellow atrophy, Weil's disease and other forms of toxemic jaundice, have nothing in their clinical course to suggest surgical interference. In the jaundice of hypertrophic cirrhosis there is the lack of pain and the presence of a greatly enlarged liver, while in the atrophic type an alcoholic history and the usual presence of a large spleen make the diagnosis.

A differential diagnosis of the remaining obstructive forms of jaundice, the surgical, is not so simple. The following are the common sources of obstruction: (1) inflammation of the gallbladder with or without stones, (2) local peritonitis, (3) stones in the cystic duct, (4) stones in the common duct, (5) cancer of the head of the pancreas, (6) carcinoma of the gallbladder, (7) new growths within the common or hepatic ducts, (8) chronic pancreatitis, and (9) compression of the common duct by swollen lymph glands, inflammatory exudations and adhesions, such as occur about chronic perforations or duodenal and pyloric ulcers, etc.

In differentiating the first four of these sources there are two very important facts to keep in mind. The first is that jaundice does not of itself have anything to do with stones in the gallbladder. What it does mean is that infection has extended from the bladder to involve the common or hepatic ducts or that a stone has lodged in the cystic or common ducts. But stones in the bladder do not of themselves cause jaundice. The second is that jaundice does not always accompany stones in the ducts, being present in only about 65 per cent of cases. Of Kelly's 216 gallbladder cases 74, or 32.2 per cent, had never had jaundice at any time; 60 of these had gallstones; 141, or 65.3 per cent., had no jaundice at the time of operation; 116, or 53.7 per cent., had both gallstones and jaundice. These are important points; that there may be gallstones and no jaundice at all and that, when it does occur, it may be inconstant and inconspicuous and even then may not be due to obstruction of the ducts with stone but to the infection extending down and causing an inflammatory swelling of the ducts to block them; and further they emphasize the fact that a good diagnostician should be able to recognize cholecystitis and cholelithiasis in the absence of jaundice.

But to return to the nine sources of obstruction that have been mentioned where jaundice does occur. In cholelithiasis without stones jaundice is comparatively rare and a history of attacks of severe paroxysmal pain without jaundice would indicate the absence of stones, whilst the history of previous colics with jaundice which disappeared within a few days without loss of weight or general disturbance would suggest stones. Yet the diagnosis is often difficult and the presence or absence of jaundice is not a very great aid in most cases.

In some cases of gallbladder disease the infection penetrates the gallbladder wall to the peritoneum, causing a local peritonitis which may give rise to a temporary jaundice. In this case the local tenderness, its temporary character and a previous history of gallstone trouble indicate the cause of the jaundice.

The third important cause of jaundice in these cases is stone in the cystic duct. This produces jaundice only where there is great thickening of the wall with subsequent pressure upon the common duct. Here the repeated attacks of colic without jaundice, the fever, chills, sweats, emaciation and gastric symptoms furnish the key to diagnosis.

The jaundice of common duct stone is of considerable significance, more than in most of these other conditions. The majority of cases of stone here give rise to jaundice at some time in their course. It changes from day to day in the early stages but may eventually become completely obstructive. We know, however, that patients may have stone in the common duct for years with comparatively few symptoms. In fact, 30 per cent or over come under observation with no jaundice or marked symptoms. The jaundice when it occurs is intermittent and usually accompanied by colicky attacks.

In this connection the size of the gallbladder is often of great clinical significance. Courvoisier, in an analysis of 187 cases, has pointed out that chronic jaundice with contraction of the gallbladder indicates gallstones, while chronic jaundice with a distended gallbladder suggests biliary obstruction of other cause than gallstones, due to pressure from without, usually carcinoma of the head of the pancreas. This Courvoisier's law holds good in about 80 per cent. of the cases. Its explanation is simple. The small bladder in the gallstone cases is due to repeated infection causing inflammatory thickening and cicatrization, so that when a stone becomes impacted to produce chronic jaundice the thick bladder will not distend, whereas, in the jaundice due to pressure from without by carcinoma of the pancreas, the healthy gallbladder readily dilates with the damming back of the bile.

But the law has notable exceptions which should be kept in mind. The thickening of the bladder wall requires time and there are cases of acute impaction of stone in the common duct with jaundice, following acute cholecystitis with a distended empyemic gallbladder. There are also cases of associated gallstone disease and carinoma of the head of the pancreas, where there would be chronic jaundice and a small contracted gallbladder and, following the law, the case would be considered one of common duct stone and the cancer be entirely overlooked. In these cases of jaundice, therefore, other symptoms must be carefully weighed before making a diagnosis. The jaundice met with in cancer alone, on the other hand, usually develops without pain, slowly, insidiously but steadily.

Carcinoma of the gallbladder produces a gradually deepening jaundice. Here it is usually preceded by the appearance of a painless, slowly growing tumor. A history of previous gallstone disease may usually be elicited. In the jaundice due to tumors within the common or hepatic ducts there is no tumor to be felt; the jaundice is painless and progressive and as a rule there is no previous history of gallstones.

The close relation between pancreatic disease and gallstone trouble has become of recognized importance. Jaundice occurs in only about 15 per cent. of cases of chronic pancreatitis that are not associated with gallstones and is, therefore, an inconstant symptom. This is noteworthy when one considers that the common duct lies in a deep groove or passes through the head of the pancreas in about 62 per cent. of bodies, and pancreatitis or growth of the head of the organ must necessarily compress this duct more or less. On the other hand, jaundice occurs in some 60 per cent. of cases of associated chronic pancreatitis and cholelithiasis, so that chronic pancreatitis as a cause of jaundice usually has a history of gallstones. The jaundice itself usually shows moderate remissions but not to the extent seen in common duct stone.

The jaundice that occurs from compression of the common duct by exudations and adhesions, following gastric and duodenal ulcers, etc., is readily differentiated, theoretically at least, by the negative symptoms of gallbladder trouble.

As to other methods of diagnosis it may be worth mentioning here that Bauer has recently published observations on alimentary galactosuria in normal and diseased individuals. He gives 40 grams of galactose in 400 to 500 cc. of tea early in the morning on the fasting stomach and then estimates quantitatively the amount of galactose that reappears in the urine. He found that alimentary galactosuria is a constant symptom of catarrhal jaundice and of cirrhosis of the liver, while in normal individuals and a great many diseases it is absent. In jaundice due to gallstones or to malignant disease it is usually absent and only slight if present. He suggests the value of this method in cases of difficult diagnosis and prognosis. Another clinical test sometimes made use of is a determination of the coagulation time of the blood; for in jaundice due to cancer the coagulation time is usually delayed, whereas in that due to gallstones or some other cause it is more often normal.

In conclusion, it may be said that the jaundice of gallstone disease is an inconstant symptom. As such it always means obstruction by stone or by inflammatory swelling of the ducts. In many cases it is altogether absent, (34.2 per cent.) although other important and distressing symptoms are pronounced. Often it is late in appearing and as often inconspicuous and is of diagnostic significance only when considered fully with the other signs and symptoms of the case. When so considered it is an important aid in differential diagnosis.

ORIGIN OF THE VARIOUS CONSTITUENTS FOUND IN URINARY STONE.*

By G. S. Gordon, M. D.

VANCOUVER, B. C.

It is to be my endeavor, herein, to unify such facts as are known to me into hypotheses concerning the origin of stone, many of which are accepted by the ablest of our profession, but some of which I am tentatively advancing myself for what they are worth. These remarks are based in part on rough chemical analysis of about 100 calculi, 30 or 40 per cent. of which have almost complete clinical and surgical histories. Unfortunately, I have no personal knowledge of indigo or urostealith stones, and my specimens include only one each of fibrin and cystin.

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*Read before the Portland City and County Medical Society, Portland, Ore., Dec. 1, 1910.

A word on the causes of stone in general:

Diet. Certain views on diet have resulted from study of stone districts in England, France, Russia, Holland, Iceland, Egypt and India.

In England, where uratic stone may predominate, it has been attributed, we think erroneously, to the eating of meats.

In India, the legumen eater only has stones; the rice eater is exempt. These stones, such as I have analyzed, are primarily uratic, later infiltrated with oxalates and triple phosphates. A. E. Roberts consequently considers an excess of potash with a corresponding deficiency of soda in the food is the cause of uratic stone.

In Holland, the prevalence of stone has been attributed to the hard water supply.

In Egypt, the bilharzia hematobia from drinking water lodges in the bladder epithelium and under certain conditions forms the nucleus of calculus.

Occupation. Certain modes of life, more especially those which entail lack of physical exercise, are conducive to stone.

Age plays a part. The children of the poor, the affluent of middle life and old people of all classes are especially subject to stone.

Sex is almost a negligible factor. Boys are more subject to sizeable vesical calculi than girls because they cannot void them when small as easily as girls. The frequency of renal calculus is about the same.

Hereditary predisposition to uratic stone must be accepted.

Climate plays no part. Stone is found in the natives of all climates.

Diseases. There is a coincidence of uratic stone and gout in England, of neurasthenia and oxalatic stone in France, but whether they bear the relations of cause and effect is not so clear. Of local diseases, we know an uninfected foreign body in an aseptic part of the urinary tract will not form the nucleus of stone; but that urealytic infection superadded produces triple phosphatic stone. Such disease may be induced by septic foreign bodies which carry both the germs to light up infection, and the traumatic power to break the epithelium of the urinary tract; or by aseptic foreign bodies such as uratic or oxalatic stone already formed, or bilharzia eggs which have only traumatic power to invite infection from without. Spinal injuries result in triple phosphatic stone formation because of cutting off nervous control of infection, thus allowing pathologic microorganisms to make headway in otherwise unassailable places.

Trauma of the urinary organs and resultant hematuria may lead to oxalatic formation.

And now to take up serriatim the elements of calculi found in *normal* urine: uric acid, calcium oxalate, calcium and magnesium phosphates, ammonio-magnesium phosphate and coloring matters.

Uric acid is mainly the ideal end product of intracellular katabolism of nucleins. Excreted into the circulation as such in passing through the liver, it is transformed, almost all of it, into soluble urea to be thrown out by the kidneys. Large amounts of uric acid given hyperdermically have consequently never resulted in stone. A certain amount is always found in urine but usually when stone forms it is not present in excess.

Xanthin. For the most part what is said of uric acid holds good of xanthin. It is uric acid only one degree less oxidized.

Oxalic acid is found in normal urine usually in soluble form. It is as the calcium salt that it precipitates as envelope shaped crystals in what is commonly known as oxaluria. This does not necessarily imply an excess of oxalic acid, but a supply of calcium free to combine with it. Oxaluria, therefore, is associated with "calcaruria" from whatever source. Calcaruria is taken up more fully in the next section. Oxalic acid itself may be derived from oxalate bearing food, such as rhubarb and sorrel; from the katabolism of gelatin bearing tissues, such as cartilage; and lastly, perhaps from the breaking down of uric acid infarcts in the kidneys in lithiasis, so called, to urea in which oxalic acid may be a by-product.

Amorphous phosphates. The acid phosphates of calcium and magnesium are very soluble and are mainly responsible for the acid reaction of the urine. Those phosphates which contain more calcium and magnesium are less soluble and form precipitates in what is known as calcaruria, or more correctly alkalinuria. Whether phosphates are precipitated or not is consequently only a question of the relative amounts of phosphoric acid and of calcium and magnesium eliminated into the urine.

The sources of calcium are, first, and of very considerable importance, ingesta, especially "alkali" water, lime water, and Epsom salts. Second, from the breaking down of calcium and magnesium bearing tissues, such as bone. This is perhaps especially marked in some forms of neurasthenia and in old age when lime infarcts form in the kidneys. Calcium may be vicariously eliminated in greater amount in the urine when catarrh of the big gut handicaps its calcium excretion function. In hyperacidity of the stomach more lime is absorbed and eliminated in the urine than in health.

Cystin, or its isomeric, is found in normal urine. Its origin is obscure.

Calcium carbonate and triple phosphates I have always found associated with infection capable of breaking up urea into carbonic acid and ammonia. Traces may be found in normal urine, but stone does not form without this pathologic supply and not then, unless the urinary tract is invaded as well as the urine.

Coloring matters. The coloring matters of the urine are colloids whose function is to attach to themselves the particles of uratic, or other crystalloids in the urine, when it becomes supersaturated and holds them in suspension for expulsion in the urine, or for solution again, should the urine become more dilute. Uratic stone probably owes its color to them, all the urinary salts of uric acid being colorless.

These constituents of stone, I take it, are not the important ones. They are found in normal urine and stone is a pathologic product. It forms irrespective of the abundance or partial deficiency of these. This supply is practically always present, but is voided in solution or as precipitates.

What is it then that agglutinates these salts into stone? That is the substance or substances of which it is all important to know all we can. Once have the cement for these salts, to bind them together before they can be voided, and we have potential stone —we have gravel; continue this supply but vary it in amount, or the salts, from time to time, in the meantime having the gravel detained, and stone forms in layers. These layers vary in density if of the same materials. They may also vary in materials so that it is very common to see an oxalate surround an urate or vice versa, while triple phosphate, following infection, forms an outer coating to most stones. As to the nature of these cements. They are probably all colloids but not the colloids of normal urine. The latter absorb particles and release them. The colloids of stone absorb particles, but do not release them. These glues stick together the urates, oxalates, etc., and then become converted into an insoluble matrix.

The best known of these so-called irreversible colloids are perhaps mucinogen and fibrogen which on standing are transformed into mucin and fibrin and then become incapable of reverting to their original form. Stone crystals imbedded in these jelly-like materials, as time goes on, ultimately find themselves in a stringy net-work, which not only keeps them enmeshed, but also renders them urine-proof.

We think it probable that there are several cement materials which have special affinities amongst the normal salts of urine to the practical exclusion of other salts.

Cement Substances.

The matrix of uratic stone. The administration of uric acid in any amount will not cause stone to form; but administration of adenin to dogs, does produce stone. Adenin is not found normally in the blood; but it does occur intra-cellularly in the processes of katabolism. Oxydized it becomes uric acid. Now if a cell is deficient in power to oxydize its waste to uric acid, it may expel this adenin into the blood and so stone may result as in administration of this substance experimentally. This toxin sets up nephritis and it is this nephritis which we look on as specific to produce an inflammatory exudate containing a cement which will bind uric acid into gravel and ultimately into stone. We are dealing with a specific chronic leucomain poisoning.

The matrix of oxalatic stone. Schade made mixed oxalatic and phosphatic stone by beating up these salts in ox blood. Israel has found iron in oxalatic stone, presumably from its blood content and, whatever the external color of oxalates, on section they are the shade of stale blood. It seems not improbable that all oxalates have blood for a matrix. It may be freed by trauma from external violence, by a stone already formed or by the passage of oxalatic crystals themselves through the renal tubules. It is probably fibrinogen and allied substances in free blood which is the cement, as whipped blood gives no result with oxalatic salts.

The frequency of oxalatic stone in old age may be due to the hematuria of sclerosed kidneys, most commonly found at this period of life.

Fibrin calculi. Fibrinogen from free blood is probably the sole origin of fibrinous calculi, so-called. The blood clot is held back, undergoes fibrinous changes before it can become infiltrated with crystals, and becomes a leached out mass of almost hornlike consistency.

Matrix of triple phosphate. The matrix of triple phosphatic stone is formed by the action of pathologic micro-organisms which have also the power of splitting up urea into carbonic acid and ammonia. The slime associated in the minds of us all with ammoniacal urine, and which is an inflammatory product perhaps containing mucinogen, is the cement substance in question.

The matrix of calcium carbonatic stone and that of calcium and magnesium phosphate seems to be that of any other stone in which the reaction of the urine will allow it to precipitate. These salts almost always adulterate triple phosphatic and calcium oxalatic stone but I have never seen a pure calcium carbonatic or calcium phosphatic urinary calculus and doubt their existence.

The matrix of cystin stone I cannot even guess at, unless it is the product of a toxin somewhat similar in action to adenin.

Treatment. The practical application of these hypotheses lies in prophylaxis. Katabolism, associated with uratic stone, for the most part seems deficient in oxydation power. We may be able to force fuller combustion within the cell of its nuclein waste, first, by using a forced draft, as it were, by physical exercise to draw in more oxygen through the lungs. Secondly, by the administration of metals capable of carrying oxygen in many combinations, such as iron, arsenic, manganese, and last but not least, mercury in small doses. (Most of us know the power of Donnovan's solution to relieve headaches in what is commonly known as lithemia, which is probably an autointoxication with leucomains, of which adenin is one.) And lastly, alcohol, because of its deoxydizing effect on blood, should be prohibited to people with the uratic dyscrasia. For nephritis, once established, the usual measures to prevent overloading the kidneys such as diet, baths, etc.

To prevent oxalatic stone from forming in cases of wound of the urinary tract, abstention from food containing much calcium or oxalic acid. Remove uratic stone before it causes hematuria by wounding its bed. In oxaluria combined with calcaruria in neurasthenic states, administer phosphoric acid.

For triple phosphatic stone, avoid urealytic infection by curing gonorrhea (which it often follows); by removal of obstruction to urination when present; (infection takes place more easily when there is residual urine); by removing foreign bodies in the urinary tract, whether introduced from without, or of pathologic production, such as uratic or other stone; and lastly and what is of considerable importance, when urealytic infection is present, control it as much as possible with urotropin. Do not administer lime or magnesia or "alkali" water, for they may so increase the supply of crystalloid material in the urine that masses of agglutinated triple phosphates, which would otherwise be voided, will grow so rapidly as to be retained to attain operable size.

To prevent formation of all kinds of stone abundance of good water is to be recommended. Biochemistry, presumably, is better carried on in dilute media and stone materials in the urine are more apt to be voided before stone can form.

303 Dominion Trust Building.

CLINICAL REPORT

TRAUMATIC INTESTINAL PERFORATION IN FOOTBALL GAME—OPERATION, RECOVERY.

By J. B. McNerthney, M. D.
Tacoma, Wash.

The widespread agitation at the close of the 1909 season, over the terrible toll of the gridiron, had the effect of a drastic change in the rules governing the game. Rules against mass plays were made and arbitrarily enforced in an effort to make the game less dangerous. The results, however, have been far from satisfactory. When the season closed in November and the football statistics were compiled, it was found that twenty-one young men had met their death as a result of the gridiron craze, while the list of injured reached the unprecedented number of 491.

The following summary of dead and injured in 1909-1910 is of interest to medical men and, as far as I have been able to learn, not a case of ruptured intestine occurred in the entire list, so that a report of the following case may be of interest.

Killed, 1910	21
Killed, 1909	30
Injured, 1910	491
Injured, 1909	236

Nature of Accidents—

Concussion of brain	18
Broken legs	40
Broken ribs	30
Broken arms	10
Broken ankles	20
Other broken bones	160
Other injuries	213
Total	491

Captain Pike, of the Whitworth College Eleven, while in active service, Nov. 1, 1910, was "kneed" in the abdomen, at 5 p. m. He was at once taken off the field and usual attendance given. He still continued to have pain, and I was phoned to come to the college. I requested that he be brought to the hospital, and I saw him at the Fannie Paddock Memorial Hospital about an hour after the injury.

There were no external signs of injury. He was still in pain, but there was apparently very little true shock; pulse and temperature normal, and he did not seem to have that characteristic, facial expression and classical symptoms that would lead you to open his abdomen; but did have the most reliable of all signs of intestinal injury, abdominal rigidity, so well described by Moynihan, of Leeds: "In rupture of the intestine there is very often the most absolute rigidity of the abdominal wall. The muscles are tense and will not yield to the gentlest or firmest pressure. Gentle kneading of the abdominal wall with the open hand does not permit a deeper examination of the abdomen."

This sign is the surest and best, and upon this sign, the continued pain and the history of the case, I made a diagnosis of acute intestinal perforation. Dr. Wilmot D. Read was asked to see the patient and had the courage to encourage me in doing an immediate laparotomy and assisted me in the operation.

The abdomen was opened as in gastro-enterostomy and a systematic search made for the injury. A rent in the gastrohepatic omentum, that was causing some hemorrhage, was easily repaired with a few catgut sutures. The jejunum, some fourteen inches from its origin, was torn transversely two-thirds across its convex surfaces. The intestinal secretions were scattered throughout the peritoneal cavity. The intestinal wound was closed by a double layer of continuous sutures (linen). A neat but hasty toilet was made of the peritoneal cavity and closed with drainage. He made an uneventful recovery, leaving the hospital absolutely well on the eleventh day. On this date, February 24, 1911, he remains in perfect health.

NORTHWEST MEDICINE
The Journal of the State Medical Associations of Oregon, Washington, Idaho and Utah.
Devoted to the Interests of the Medical Profession of the Pacific Northwest.
Editorial Office, 719-22 Cobb Building, Seattle, Wash.
APRIL, 1911.

EDITORIAL

HEALTH OF THE SCHOOL CHILDREN.

Public schools in every community contain children at a growing age. It is becoming more and more recognized by school boards that the physical condition of children requires the oversight of a medical corps, not only for the purpose of protecting one child from another, but in the matter of protecting a child against the later ravages of inherent conditions that are not communicable, which may cripple the coming adult citizen.

It is of hours of attending school, luncheon periods and their relation to the welfare of the children that we wish to speak. Take a child from six to fourteen years old. He is active, naturally seeking fresh air and outdoor amusement. Restraint is irksome. A precocious desire to study is unusual. His mind is not fitted naturally to systematic application. If he be bright, school work, so far as lessons go, may be easy. All children are not bright, so to get results they have to be driven. To be driven provokes unhappiness. Unhappiness spoils dispositions. Many school rooms are poorly lighted and poorly ventilated. The children may be driven to work by the nervous excitement of competition. So we see our children bound by iron-clad rules, which of necessity must prevail when large numbers are to be handled, although we all know that what may be good for one may be injurious to another. For the best part of a forenoon and a fair part of an afternoon we see our children housed, over or under heated, more than likely under ventilated, compelled to be still, restrained, harassed, goaded on to nervous competition.

On the other hand, see what happens to children of those who can afford private instructions. Their hours are reduced fully a half; an equal amount of learning is accomplished and more time given to freedom. The result, other things being equal, is greatly in favor of the boy or girl who has the largest part of his time to follow the bent of his own inclinations, provided his parents do not insist on hours of practice on some sort of musical instrument.

Could we not expect our children to learn as much in one half day's attendance as they now learn in the two sessions? One other thing that a half day's attendance would do to improve the physical condition should be taken into account, i. e., digestion. Now a child must rush home from school, hurry himself and everyone else, and get what for him should be his heaviest meal, bolt it down and hurry off to school again with a half-chewed meal, possibly a half sufficient meal in his stomach, return to his seat in school where he supposedly works his brains. Long ago schools taught us that proper digestion required time. A man doing manual labor gets some time for digestion after eating. Not so our children. They hurry to school, keep in the nervous excitement of being late and are then put directly to their duties. Others, on account of short hours, take cold lunches, or are given money with which they buy undigestible things that nearby stores provide, and thus damage themselves. Much of the time of good body building of our school children, both before and during the sexual development, is spent in some unhygienic manner, on account of school regulations, in an endeavor to develop the brain and the unintentional effort to pervert the body. The writer rarely fails to help find a good excuse for a parent to request that his boy or girl be allowed a half day school period or a long luncheon hour. C. W. S.

RECENT MEDICAL LEGISLATION IN WASHINGTON.

So far as the medical profession is concerned, the work of the recent session of the Washington legislature was characterized by negative rather than positive results. Without exception all bills introduced by individual physicians or official bodies, pertaining to medical matters, failed to pass. A few ran the gauntlet in one branch or the other, but failed of endorsement by both bodies of the legislature. No action was taken to modify the medical practice act in any respect, which will meet with the approval of physicians at large. The most radical action of a negative nature was the reduction of the apportionment for the State Board of Health from $40,000 to $27,000 for the coming biennial period. This has resulted in an unfortunate curtailment of the useful activities of the board. It will necessitate the abandonment for the present, as well as the indefinite future, of the traveling health and sanitary exhibit which has within the last two years imparted a great deal of instruction to the public on the subjects of tuberculosis, typhoid and general sanitation. It will cause a reduction in the efforts which have been instituted in certain sections of the state for the supervision of water supplies for cities, as well as the investigation of certain local epidemics which may arise during the next two years. Some of the work established along these lines in the past will be continued, but lack of funds will necessarily prevent such a broad carrying on of the work as has been hitherto contemplated.

The employer's liability act, which has become a law of the state, will affect the medical profession to an extent which can only be determined by the carrying out of the provisions of the act. According to this, a fee of $5 will be paid one or more physicians in each county for making official examinations and reports of injuries. In case of appeal from the commission to the courts, an examining committee not to exceed three physicians will be appointed, whose compensation shall not exceed $10 per day each. The commission is given rather wide and indefinite authority for the expenditure of the public funds in a provision which assigns to it the supervision of the medical and hospital treatment which, according to their opinion, must be carried out in a suitable and wholesome manner. It would seem as if this gives the commission an almost unrestrained power for the establishment and maintenance of hospitals and the necessary employment of physicians and nurses for the care of the patients. It will be interesting to note the manner in which this provision is carried out by the commission.

While it is a matter of regret that the legislature has seen fit to reduce the possible work for benefit of the public health, it is a matter of congratulation that none of the freak medical legislation was enacted, of the sort which has at times passed the legislatures of other states. C. A. S.

THE JULY MEETING OF THE OREGON ASSOCIATION.

The date for the holding of the annual session of the Oregon State Medical Association has been definitely set for the three days beginning July 10th. The Committee is meeting with marked success in procuring the lecturers from the East and it is hoped to make this a real postgraduate course. Such men as John B. Murphy and Myrik Ravanell, of the Hygienic Laboratory of Wisconsin, and a number of specialists in other lines have already accepted the invitation and we are hoping to make this one of the greatest meetings that has ever been held by the State Association. C. S. W.

ANNUAL MEETING OF THE IDAHO ASSOCIATION.

The next annual meeting of the Idaho State Medical Association will be held at Boise October 11-13, 1911. At the last meeting it was decided to hold the 1911 meeting on Wednesday, Thursday and Friday during Fair Week, in October. Since the fair has been set for the second week in October this will put the meeting on the dates above given. E. E. M.

PATRONIZE OUR ADVERTISERS.

The advertisements which are carried in Northwest Medicine are selected with much care, in order that they may conform to the requirements of a strictly ethical character, only those being accepted which meet the rules laid down by the American Medical Association. We have had occasion frequently to refuse advertisements which would pay us good money and which could be obtained for the asking. While refusal of such contracts has very materially encroached upon our income, the effect of which at times has been very seriously felt by the journal management, yet we have realized that such a course would meet with the approval of our readers in the different State Associations interested in the journal, who favor the plan of endorsing only those preparations and appliances which are considered ethical by the thoughtful practitioner. Therefore, we feel justified in urging upon our readers to patronize those firms, whose preparations and products are advertised in our pages. Such patronage will help to encourage those kinds of preparations which should be supported by the profession, and will help to put this journal on a firmer financial basis, which result we are sure will meet with the approval of all our readers.

J. B. E.

MEDICAL NOTES

OREGON.

Crook County Medical Society. This is one of the most unique medical societies of the United States. The county itself is a great deal larger than some of the Eastern states and has ten physicians in the county, of whom nine belong to the society. At the quarterly meeting, held the 26th of February, seven of the members were present, despite the fact that some of them had to come from 35 to 50 miles in automobiles. The day was one of the unusual days of winter; a perfect blizzard was raging part of the day and snow to the depth of four or five inches had fallen, but, undismayed, the members braved the elements and gave a proportional attendance very much larger than we have in our city societies. The organization in Crook County could be taken as an example by almost any medical society in the Northwest and this is one place where the missionary efforts of Dr. McCormick would be unnecessary.

Unlicensed and irregular practitioners in Portland are being kept on the anxious seat recently, due to the fact that the State Board of Medical Examiners has been investigating and making arrests. Several of the newspapers are giving aid to the State Board and also to the public by publishing some of the findings relating to these quacks and fakirs. Such publicity must necessarily result in opening the eyes of the public to the qualifications and undesirable methods which are part of the stock in trade of this class of "practitioners." In one case, which resulted in conviction, the fact was brought out that the "practitioner" had devoted nearly four months of his time, and twenty dollars in cash to acquiring his education. Another man, who was acquitted by a jury, is said to have showed better credentials than most of the others, having studied nine months in Davenport, Iowa.

Dr. Ralph Matson has left for Europe to study methods of treating tuberculosis. He will read a paper at the next World's Tuberculosis Congress upon "Comparison of Methods in the Treatment of Tuberculosis."

Ten thousand dollars has been subscribed by the Commercial Club of Ontario to go toward the building of a Catholic Hospital. The hospital, which is to be built this year, will be of brick and will occupy nearly a block.

Burglars entered the house of Dr. W. L. Wood of Portland while the doctor was away on a vacation in Arizona. As soon as he returned, he turned the case over to detectives, who have been successful in finding most of the stolen property.

Dr. Glen Wheeler and Dr. Anna M. Regan, both of Portland, were married March 15, 1911. They have gone to spend their honeymoon in Southern California.

Dr. Frank E. Smith has been appointed superintendent of the State Institution for the Feeble-Minded to take the position left vacant by the resignation of H. E. Bickers.

Dr. Roy Byrd has recently been appointed physician at the penitentiary to succeed Dr. J. M. Smith.

WASHINGTON.

Northern Hospital for the Insane. F. H. Olmstead, the famous landscape architect, who planned the grounds of the A.-Y.-P. E., has been employed to lay out the buildings and grounds for the Northern Hospital for the Insane at Sedro-Woolley. The appropriation made by the legislature is now available, and the work will be pushed as fast as possible.

The Bremerton Hospital Association. The physicians of Bremerton have united to form a Bremerton Hospital Association, and have assumed control of the Bremerton Hospital. In view of the prevalence of hospital associations which do work upon a more or less unethical basis, it would almost seem advisable for such associations as this new one, which is composed of regular practitioners, to choose some other name, thus avoiding the stigma which has come to be attached to such a name.

The new St. Joseph's Hospital, in Vancouver, has been finished, and is open for the reception of patients. The old hospital, as soon as the inmates are able to leave, is to be transformed into a home for the aged, to be known as the Blanchett Home.

The cornerstone of the new Orthopedic Hospital, in Seattle was laid, with impressive ceremonies, March 15, 1911 The cornerstone contains official reports of the Hospital Association, articles of incorporation, the name of each child in the hospital, with a penny from each one, copies of the daily papers, etc.

A New Hospital. St. Mary's is to have a new hospital. It is being built by the St. Mary's Hospital Association, which numbers among its directors some of the officials of the Milwaukee Railroad.

Dr. David Livingstone, of Centralia, has finally been successful in his search for a successor to the position of City Health Officer. He has been trying to let go of his position for several months, but only recently was able to prevail upon Dr. Madison to take up the duties of the office.

A city laboratory for the testing of milk, water, cultures, etc., has been established in Yakima. It is in charge of Dr. Tetreau, the city physician, who will use it not only for city work, but also in co-operation with the county and state boards of health.

The smallpox epidemic along the northern border of the state has diminished to such an extent as to cause no further uneasiness. Many of the cases are already out of quarantine, and very few new ones have been reported.

Typhus Fever is the provisional diagnosis made of a disease which has recently appeared in Spokane. The cases have been isolated, and tests are being made to establish the diagnosis conclusively.

Dr. B. H. Roark has been appointed assistant county physician of Spokane County by Dr. W. Q. Webb, and will take up his duties at once.

Dr. F. J. Whittaker, of Spokane, has moved to Republic, where he will have charge of a new hospital.

Dr. A. E. Gibson and his wife, who was formerly Miss Pearl Z. McMaster, have returned to Blaine from a wedding trip throughout the East.

IDAHO.

Victim of the Hair Oil Habit. The local paper of Kamiah announces the death of Dick Moses, well known Indian, from the above disease, after lying in a stupor for eighteen days and partaking of no food. He was mourned by the pale faces as well as the red men.

A bill providing for the registration of nurses was passed recently by the legislature. The graduate nurses of the state have been working for two years to secure the passage of such a bill, and consequently are highly pleased with this result of their labors.

Dr. H. R. Jones, after spending a year in post graduate work, has located in Springfield.

The Milwaukee Hospital Association is to build a $15,000 hospital in Bovill in the near future.

Dr. F. H. Poole has been appointed superintendent of the Idaho Insane Asylum, at Blackfoot, to fill the position vacated by the retirement of Dr. Hoover.

OBITUARY.

Dr. B. N. Bond died at Bellingham, February 28, death being due to old age. He was born at Kaskaskia, Ill., in 1826, his father being an official of the territory of Illinois, and afterwards was elected the first governor of the state. The doctor was the oldest Mason in the State of Washington. He was also a member of the G. A. R., having served as surgeon throughout the Civil War. He began the practice of medicine at Chester, Ill., where he remained until the beginning of the Civil War. He engaged in many of the prominent battles of that struggle. He was a man of marked characteristics, having boasted that he never took a drink of intoxicating liquor. He was personally acquainted with Abraham Lincoln, whom he met at his father' house, when the distinguished President was a circuit lawyer.

Dr. W. C. Hastings died in Seattle, March 18, of chronic disease of the heart. He has been an invalid for the past two years as a result of a fracture of the hip. He was born in Newcastle, Indiana, in 1852. After graduating from Earlham College, Richmond, Indiania, he received his medical education at Pulte Medical College, Cincinnati, Ohio, after which he practised for a number of years in Van Wert, Ohio. He has practised in Seattle for the past ten years. He was prominent in a number of secret orders and was a well-known citizen of the city.

Dr. J. L. Akin died at Albany, Ore., March 4. He was born in Iowa, in 1836, crossing the plains to Oregon in the year 1852. He spent two years in Multnomah County and later settled in Benton County, near Bellfountain, where he lived continuously until six years ago. He then moved to Linn County, where he practised medicine for many years, and was well known throughout the Willamette Valley.

Dr. J. L. Conant, Sr., died January 8, at Weiser, Idaho, at the age of 80. He practised for a number of years in Michigan and Nebraska before going to Idaho. For ten years he practised in Genessee. About ten years ago he settled in Weiser, where he had a drug store as well as practising medicine. His son, Dr. J. L. Conant, Jr., died in Boise last spring. His grandson, Dr. C. C. Conant is a prominent physician in Weiser.

Dr. J. W. Filkins, of Seattle, Wash., died at Pasadena, Cal. March 1. He had been a resident of Seattle since 1889. He never practised medicine in that city, but engaged in banking, under the name of the Filkins Banking Company. He served during the Civil War as a surgeon. He went to Pasadena for his health last fall.

Dr. Rufus C. Corey died in Seattle, February 13, from morphin poisoning. He has been in practice in Seattle for about fifteen years.

REPORTS OF SOCIETY MEETINGS

OREGON.

PORTLAND CITY AND COUNTY MEDICAL SOCIETY.

Prest., A. E. Rockey, M. D.; Secty., G. S. Whiteside, M. D.

The Portland City and County Medical Society met in their rooms in the Medical Building, 8:30 p m., March 1, 1911, Dr. A. E. Rockey in the chair.

Members present: Drs. Buck, Booth, Dammasch, Flagg, Flagg, Fenton, Greene, Gellert, Kiehle, Knox, McArthur, Marsh, Murbach, Nunn, Norden, McGavin, Pierce, Parrish, Rockey, Richardson, Roth, Rybke, Sheldon, Swensson, Mackenzie, Tilzer, Weir, Whiteside.

Pathologic Specimens.

Dr. A. J. Mackenzie showed a specimen of uterus, ovaries and tubes in a woman six months pregnant and having large fibroids. Also another specimen of a tumor of the uterus. Also a horseshoe kidney from a man. This he considered a horseshoe kidney on the right and a normal kidney on the left. This kidney had two branches of its ureter, i. e., a Y shaped ureter.

Dr. Swensson showed a uterus with large multiple fibroids and a multilocular cystic ovary.

Dr. Weir showed a four tailed knit eye bandage.

Papers.

The Diagnosis and Treatment of Interstitial Nephritis. By Dr. H. M. Greene. Thinks with proper care individuals so affected may live comfortably for many years. Interstitial nephritis does not begin in the kidney but is the result of increased arterial tension. Treatment. Avoidance of exposure to cold and proteid in excess in food. Drugs which increase oxidation of the blood and lower the arterial tension are valuable.

The Electro Magnet as Used in the Eye. By Dr. Richard Nunn. First used in 1876 for extraction of steel from the eye. Some have used small magnets and some large ones. He showed a medium-sized one which has the advantages of both. It weighs eight pounds and attracts 45 or more pounds.

Dr. A. Tilzer opened the discussion on Dr. Greene's paper. Interstitial nephritis is secondary to arteriosclerosis. Its onset is gradual and insidious. Many people live 20 or more years after a diagnosis is possible. Apoplexy is usually the termination finally. On the other hand, acute parenchymatous nephritis is the disease with anasarca and ending in uremia.

Dr. Kiehle says Dr. Nunn has given an interesting exhibit. Mentions the importance of locating these particles of steel with the X-ray. Trauma should be avoided as much as possible in extracting these foreign particles.

Dr. Mackenzie speaks on the pathology and treatment of contracted kidneys.

Dr. Knox believes arteriosclerosis is always accompanied by interstitial nephritis. If the blood pressure be as much as 200 nephritis is undoubtedly present. Arteriosclerosis is the primary cause of interstitial nephritis. No drug can alter the changes in the kidney.

Dr. Rosendorff instances a case from his practice of chronic parenchymatous nephritis with diminished urine and dropsy. All sorts of drugs were used. Finally by limiting the liquids to a minimal quantity and also restricting the diet to a salt free diet, improvement began. Another case in a younger patient was equally successful. The total quaitity of urine increased to 35-50 oz., and the anasarca diminished. The theory of this treatment is to give the heart as little work to do as possible.

Dr. Weir reported, some years ago, fifty cases of foreign bodies removed from the eye. In these cases the flake of steel sometimes lodges in such a way that their broad surface is facing anteriorly. In such a lodgement the magnet finds difficulty in pulling them out. Reports in detail a case of a man with a piece of steel in the vitreous.

Dr. Booth speaks of the influence of syphillis as an etiologic factor in the production of arteriosclerosis. Mentions several drugs which have seemed to give good results in his practice.

Dr. Swensson believes only in diet and hygiene in the treatment of interstitial nephritis

Dr. McGavin believes in hydrotherapic measures in cases of nephritis with dropsy.

Dr. Rockey speaks of Edebohls' decapsulation of the kidney. Thinks the subject of greatest interest is in the prophylaxis of exclusion of poisons from the large intestine.

Dr. Greene, in closing, says he believes finding albumin and casts in the urine is of little consequence unless the blood pressure is increased. Agrees with Dr. Rockey in accusing the large intestine and thinks it should be eliminated from the fecal circulation. Defends the use of small doses of morphin in that it increases the oxydation of the blood.

Dr. Nunn, in closing, agrees with Dr. Weir. Speaks of the advantages of a cup-shaped point to the magnet.

The second regular meeting of the society was held in their rooms in the Medical Building, at 8:30 p. m., March 15, 1911, Dr. Rockey in the chair.

Members present: Drs. Buck, Barbee, Bristow, Bettman, Coffey, Dammasch, Flagg, Gellert, House, Johnson, Jones, Kiehle, McArthur, Murbach, Marcellus, Mackay, McCollum, C. C. Moore, McGavin, O'Day, Pease, Rockey, Richardson, Rybke, Rosendorff, Sheldon, A. W. Smith, Sternberg, Sifton, White Whiteside. Visitors: Dr. Paul Rockey, Mr. Napier, Mr. C. L. Daggett, Prof. Pernot, Dr. Hutchinson, Mr. S. G. Reed.

Pathologic Specimens.

Dr. Marcellus, Veterinary Onspector U. S. Bureau Animal Industry, shows an X-ray plate of an arm showing congenital absence of bone in some places.

PAPERS.

Meat Poisoning. By Dr. E. N. Hutchinson. No proper inspection of dressed meat trade in this city. Recites many cases of killing of cattle or hogs which were shipped to Portland because they were sick and would not get well. Gives statistics of illness caused by eating diseased meat. Ptomain poisoning. Some deaths. These were in persons who had eaten meat from cattle suffering with various degrees of sepsis. The liver seems to be particularly dangerous. In many recorded instances it is found that cooking does not destroy the poison of the meat. Just as long as there is no enforced law, there are many butchers who will buy and many farmers and dairymen who will sell al their diseased, injured and decreipt animals. In the United States such laws are not framed to protect the public against illness but with the idea of protecting our meat trade.

Discussion opened by Professor Pernot (Bacteriolgist for the State Board of Health). Thinks Dr. Hutchinson did not emphasize the fact that all the cases mentioned were due to organisms growing in the animal's body as noxious bacteria and not as ptomains. Therefore, we must consider this as a saprophyte utilizing dead tissues.

Dr. Wm. House recites seven cases seen recently in Vancouver, Wash., suffering from an extremely marked multiple neuritis owing to eating biscuits made from cream from a cow with a septic mastitis. Professor Pernot says he doubts if the cream had been used fresh enough it would not have caused the above.

Dr. C. S. White speaks of a slop-fed hog ranch near Albany which caused hog cholera. Says we have a good state law but there never has been a carcass refused under this law in Portland. Thinks the market inspector should be a veterinarian and have command of a laboratory.

Dr. A. W. Smith speaks for the City Board of Health and shows the limitation of activity by political persons. Thinks Portland has shown considerable improvement in many of these ways. Realizes the conditions Dr. Hutchinson has spoken of and many other such sonditions. He thinks other reforms will come.

Dr. Hutchinson closes by saying that certain dairymen and farmers lose nothing of meat value on their farms however diseased. There are men who will traffic in the meat. The objection to the present law is that it throws the meat trade to Federal inspected slaughter houses. Describes the gross pathologic lesions of sepsis and tuberculosis in dressed meat.

Sanitation of Our City. By. Mr. C. L. Daggett, speaks of the prevention of disease. Municipal garbage collection should be used and should be free. Goes into details regarding districting, wagons, etc., etc. Incinerator should be outside the city limits. Advises the reduction of garbage and utilization of by-products. The sale of these would go far toward operation of garbage collection. Gives figures to support this. Loss of valuable by-products mentioned.

Discussion opened by Mr. Napier (Superintendent City Garbage Crematorium). Collection. There is a bill up now for municipal collection. Garbage containers. Rats and flies are the distributors from openly placed cans or barrels. Garbage incinerators. The running expense is less now—57c per ton—than at first when it seemed to be $1.25. Dr. Wheeler is actively working at it.

Dr. A. W. Smith says that in older countries nothing is wasted. Here in the West we are still wasteful. Agrees with Mr. Daggett that the present system is very wasteful. The by-products are fertilizers. Here farmers have not yet learned its value. A municipal garbage system is a crying need.

Dr. Hutchinson speaks of slop-fed hogs as bad garbage reducers.

Mr. Daggett, in closing, speaks of the procrastinating influence of politics in this matter.

WASHINGTON.

KING COUNTY MEDICAL SOCIETY.

Prest., G. B. McCulloch, M. D., Secty., H. E. Coe, M. D.

The regular semi-monthly meeting of the King County Medical Society was held in the Seattle Chamber of Commerce, at 8 P. M., March 6, 1911, with the President, Dr. McCulloch, in the chair. About 85 members were present.

PAPERS.

Tuberculous Enteritis and Peritonitis. By C. A. Smith. He mentioned primary and secondary forms of enteritis, symptoms, diagnosis and treatment. He reported two cases, the first illustrating the difficulties of differentiating tuberculous enteritis from amebic dysentery, and the second from typhoid fever. He discussed the surgical treatment of tuberculous peritonitis.

Tuberculosis of the Cervical Lymph Glands. By W. S. Griswold. He described anatomy of the cervical lymphatics; route of infection; diagnosis and differential diagnosis; complications. In speaking of treatment, he mentioned the slight efficiency of drugs, the necessity of good hygiene, the results of surgery, and closed with a very able and practical discussion on the use of tuberculin.

The Seattle Pulmonary Hospital. By A. L. Cook, superintendent of the hospital. He spoke of the founding of the hospital, its administration and organization, and described the work being done, calling attention to the fact that sixty-two per cent. of the patients discharged to date were apparently cured. He thinks that sanatorium treatment of tuberculosis is just as successful on Puget Sound as elsewhere.

Reporting Tuberculosis Cases. By E. R. Kelley, who spoke of the advantages to be derived from such a system. He presented the salient points of a proposed bill which he had drafted, covering the subject, and which he hoped would be acted upon by the next legislature.

The Anti-Tuberculosis League. By R. M. Stith. He discussed securing suitable quarters; the necessary requirements and equipment for a sanatorium; the source and annual distribution of funds; the relations to the City of Seattle; duties of visiting nurses; sources of information concerning cases of tuberculosis and methods of dealing with the various classes of cases.

In discussion E. O. Jones objected to the statement as to the good effects of tuberculin in tuberculous adenitis, saying that in his experience large tuberculous glands in adults were not favorably influenced by tuberculin.

B. S. Paschall stated that tuberculous adenitis in adults is hard to treat with tuberculin on account of the high degree of anaphylaxis, and the severe reactions often following very small doses. The dose can be rapidly increased in such cases to an immunizing dose, if the patient be kept in bed. He says the best results are obtained in children.

W. S. Griswold emphasized the combined use of tuberculin and surgery in adenitis, and stated that changing the kind of tuberculin frequently gives beneficial results.

H. J. Davidson spoke of the need of co-operation of the medical profession with the Anti-Tuberculosis League and said that the instruction given by the league was of great assistance to physicians in the treatment of their patients.

F. L. Horsfall commended the work of the league but objected to any implication that most men have not time to treat their cases carefully. He called attention to five points of importance in diagnosing tuberculosis.

E. L. Bickford objected to the work of the league, saying that it had no right to treat other doctor's patients.

Drs. Horsfall and Davidson, in quick succession, made several well-tempered but temperate remarks on temperature.

J. M. Brown emphasized the need of early diagnosis.

In closing, R. M. Stith stated that the league in no way assumes that the physician is unable to diagnose and treat cases properly but instead wishes to aid him. He stated that the care of the tuberculous patient is more a sociologic problem than a medical one, and emphasized the fact that only in indigent cases without a physician the patients are referred to the physicians connected with the league.

The second regular semi-monthly meeting of the King County Medical Society was held in the Assembly Room of the Chamber of Commerce, at 8 p. m., March 20, 1911. The meeting was called to order by the President, Dr. McCulloch, about fifty-five members being present. H. D. Dudley acted as secretary pro tem.

PAPERS.

Diverticula of the Esophagus.—By F. T. Hyde, who discussed classification of cases, description, anatomy, treatment; and report of a case, in the description of which he discussed symptoms and diagnosis.

Anaphylaxis.—By S. A. Owens. He began with a report of a case, following with an account of the earlier observations, description of symptoms, experimental investigation, and statistics, theories as to cause and manner of production of symptoms, conclusions.

In discussing the first paper, G. S. Peterkin commended the concise and scientific presentation of the subject.

F. T. Hyde emphasized the possibility of a tuberculous bronchial gland causing esophageal diverticula.

In discussing the second paper, W. H. Hall spoke of the possibility of anaphylaxis in cases of scarlet fever, where antitoxin was given, or in cases where the diagnosis of diphtheria was doubtful. He stated that the use of globulin was not followed by this phenomenon as frequently as the use of ordinary antitoxin. He thinks that some of the earlier deaths reported were possibly due to timidity about using large doses.

P. W. Willis reported a case which terminated fatally, in which antitoxin was given for the effect of the horse serum upon asthma, also his own experience in taking several immunizing doses. He stated that in his own case the urticaria was much more marked following the later doses than the first.

G. S. Peterkin reported a case in which 606 was given intramuscularly. Three weeks later, on account of continued positive Wassermann reaction, more 606 was given intravenously. Four hours after this second dose there was violent purging and vomiting, lasting three or four hours. He suggested the possibility of a similarity between this effect and the phenomenon of anaphylaxis.

J. C. Dallenbach suggested the giving of atropin immediately before giving a dose of antitoxin, in cases where anaphylaxis might be suspected.

F. T. Hyde asked the relationship between age and anaphylaxis.

J. B. Manning stated that every child admitted to the Boston Children's Hospital receives an immunizing dose of antitoxin, which is repeated every three weeks, some cases remaining in the hospital as long as a year. He has frequently noticed local reactions, but these have not been severe, and there have been no fatalities.

The President stated, in response to a question, that he had very frequently had occasion to give antitoxin to children, but had never had any cases which showed anaphylaxis.

In closing, S. A. Owens stated that all deaths reported had been in adults, and that there was a possible total of fifty in all.

E. F. Cunningham was elected to membership.

LEWIS COUNTY MEDICAL SOCIETY.

Pres., R. B. L. Banks, M. D.; Sec., W. B. Hotchkiss, M. D.

The regular meeting of Lewis County Medical Society was held at Centralia, Wash, March 6, 1911, at office of Dr. Kniskern. The early part of the evening was devoted to topcs of general interest to the profession, presenting cases of obscure origin and indefinite symptoms for discussion. Careful notes of the same were made by each member present as a guide for the future treatment of such cases. After a literary program, the physicians treated themselves to a banquet, resolving, while doing so, that in the future the best interests of the physicians, as also their patients, would be served by frequent meeting of all physicians for discussion of cases and the interchange of ideas, each physician present vowing to himself that he, at least, would be a frequent attendant at the meetings and endeavor to encourage all members when possible to do likewise, feeling that nothing but good would result therefrom.

PIERCE COUNTY MEDICAL SOCIETY.

Prest., J. B. McNerthney, M. D.; Secty., E. O. Sutton, M. D.

The regular meeting of the Pierce County Medical Society was held at Tacoma, Wash., Feb. 6, 1911. Dr. J. R. Brown in the chair.

PAPERS.

Observations from the General Treatment of Fractures. By Dr. Wagner. Presented radiograms of a great many difficult fractures. Spoke definitely upon the danger of dislocations being overlooked when accompanied with fractures and showed several pictures illustrating cases in whch the diagnosis of the dislocation was wholly dependent upon the X-ray exposure. He paid especial attention to the ethics of fracture work. Nowhere, he claimed, was greater care needed than in dealing with a case for any reason coming from another practitioner. The merest word, look or gesture was often enough to stimulate dissatisfaction and legal trouble.

The Open Method of Treating Fractures. By Dr. J. R. Yocom. The writer's views have changed radically during the last few years and while he does not advocate the open method for all fractures, he believes the method is preferable in all which have proven to be difficult to retain by the usual treatments. He cited fractures of the bones of the forearm and oblique fractures of the long bones as being specially benefited by the open method.

Special Fractures. By Dr. F. J. Schug. The paper was most interesting as it was abundantly supplied with illustrations from Dr. Schug's practice. The point was emphasized that the X-ray should often be used as a routine feature in the course of fracture treatment.

Pierce County Medical Society held its regular meeting, February 21, at the Tacoma Hotel.

Paper.

Difficulties in the Surgery of Children. By Dr. E. A. Rich, gives many of the author's original methods in dealing with some of the problems presented in orthopedic surgery, particularly tendon splitting and transplantation. It has attracted considerable attention both in Portland and Tacoma and will be read by request in Spokane, April 25.

At the regular meeting of March 7, Dr. C. W. Batsford gave a review of his recent observations in the medical centers of the East, upon the Wassermann reaction and the therapeutic value of salvarsan.

In the general discussion members of the society reported over a hundred cases of syphilis treated with salvarsan, showing approximately 12 per cent. of failures. Dr. Batsford says that in Chicago the failures are about 17 per cent.

SPOKANE COUNTY MEDICAL SOCIETY.

Prest., E. D. Olmsted, M. D.; Secy., Frank Hinman, M. D.

There were 48 members present at the meeting of the Spokane County Medical Society, held March 16, 1911, in the office of Thomas & Lambert. The minutes of the last meeting were read and approved.

PAPERS.

Nitrous-Oxide Oxygen Anesthesia. By S. W. Schaefer, of Portland. The writer demonstrated the use of the Gatch apparatus, after finishing the paper, upon a two-year-old boy on whom Dr. Libby performed a circumcision before the society.

Dr. Neff opened the discussion, saying that this anesthetic had been used for some time in Chicago, starting with the gas, then ether and finishing with oxygen. Bevan and Crile have both used it extensively. He himself took N-O gas a few years ago, followed by ether and terminated with oxygen and found it not unpleasant to take. Crile, on account of the expense, has installed a generating tank in the Lakeside Hospital, in Cleveland, and pipes the gas up to the operating room.

Dr. J. G. Matthews has had no experience with this anesthetic, but has used ethyl-chloride, followed with a few drops of chloroform and then ether, and he thinks the expense of N-O-O unreasonable.

Dr. F. E. Rose spoke of the result following the administration of the N-O-O by Dr. Schaefer for an amputation of the breast operation that morning which had lasted about one and a half hours. The patient had awakened on the table, had asked for water within half an hour and has been taking liquids for four hours without any sign of nausea or vomiting.

Dr. Lambert said that his interest in this anesthetic was great because of two recent deaths following ether, one from pneumonia, the other from anuria. He believed this to be ideal in many conditions, according to Schaefer's statement as many as 90 per cent of the cases at the Johns Hopkins Hospital, but that it was particularly indicated in such cases as strangulated hernia, nephritis, bowel obstruction, pneumonia, chronic bronchitis, severe sepsis, etc.

Dr. Power spoke of the interesting point regarding the stimulating effect of CO_2 as bearing on the custom of those in British India of plugging the nostrils with mud in cases of shock. He asked what the blood pressure was in this anesthetic.

Dr. Kalb asked as to the cost.

Dr. Schaefer, in closing, said that the blood pressure was raised 20 to 30 mm. Hg. The sequence mentioned by Neff had been practised for years at Johns Hopkins. He did not claim this as the ideal anesthetic for all conditions and would hesitate to give it where complete relaxation was demanded, though the use of a little ether would give this.

Cancer of the Uterus. By Dr. A. T. R. Cunningham, who also exhibited an adeno-carcinoma of the body of the uterus.

Dr. Neff opened the discussion by emphasizing the importance of a careful anamnesis to determine the relation of menstruation to the menopause. In fibromata the menopause is delayed, in cancer often premature. A menopause that occurs from 45 on indicates, in increasing proportion, fibroma; so that, if at 55, about 90 per cent. have fibroma. However, if it occurs around 43 and four or five years later the patient starts to flow again, the indication is 98 per cent in favor of cancer of the cervix or uterus. Cancer of the fundus is comparatively benign while of the cervix it is relatively malignant. When of the cervix the outlook is practically hopeless; when of the fundus there is a good chance of recovery. Therefore, amputation of the cervix for cervical tumor gives as good results as the more extensive hysterectomy.

Dr. Power spoke of the clinical test for cancer in general by determining the antitryptic strength of the blood serum, the cancer cells apparently forming some form of antibodies for trypsin.

Dr. Cunningham, in closing, took exception to the statement of Neff in respect to treatment by simple amputation of the cervix. High amputation he thought rational in squamous cell cancer of the cervix, where the surgeon was sure that the tumor did not extend above, but unless frozen sections were made the safest way was to do a complete hysterectomy, as a women at that age would lose nothing by it.

Clinical Case.

Matthews reported an interesting case of cancer of the scalp in a boy of 14 with metastasis to the glands of the neck. Operation was removal of the growth with the regional periosteum, which did not seem to be involved, and a dissection of the glands of the neck. After five months the boy is well and has no recurrence.

On motion the secretary was instructed to send the following letter to Mayor W. J. Hindley:

Dear Sir:—At its regular meeting last night the Spokane County Medical Society unanimously voted that a letter of congratulation be sent you upon the broad minded attitude you have evidenced in regard to a reorganization of the City Board of Health. This letter you may take as an official statement of such motion..

A motion was passed authorizing the sending of this night message to Dr. Olmsted now in St. Mary's Hospital, Rochester, Minn:

Dear Doctor:—The Spokane Medical Society at its regular meeting last night unanimously voted that a message of well feeling towards you and best wishes for your successful recovery be sent you, also the expression of the sincere desire for your speedy return to health, to continence and to Spokane.

BOOK REVIEWS

Edited by Kenelm Winslow, M. D.

Differential Diagnosis. Presented through an Analysis of 383 cases. By Richard C. Cabot, M. D., Assistant Professor of Clinical Medicine, Harvard Medical School. Octavo of 753 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1911. Cloth $5.50 net.

This is a case book. The cases are grouped under the most prominent symptom of the case in point. Thus there are twenty-three symptom-groups or chapters on the following subjects: Pain, headache, lumbar pain, general abdominal pain, epigastric pain, right and left hypochondriac pain, right and left iliac pain, axillary pain, pain in the arms, legs, and feet, fever, chills, coma, convulsions, weakness, cough, vomiting, hematuria, dyspnea, jaundice, nervousness. At the beginning of each chapter there is a graphic chart showing the causes of the symptom under consideration in order of their frequency. These charts are based on statistics and the results are sometimes astounding. What man engaged in general practice would believe that the most frequent cause of epigastric pain was gastrohepatic congestion due to cirrhosis or cardiac trouble. Yet this is two and a half times as common a cause of epigastric pain as the next most frequent cause—appendicitis. And who would think constipation four times as common a cause of general abdominal pain as any other. This is partially explained when we know that Cabot considers constipation secondary to a neurosis in many cases. The most frequent factor in epigastric pain may be explained by the cases having been drawn from a strictly medical service.

Under each case the history, symptoms, physical examination and laboratory findings are recorded and then comes a discussion of the case from the standpoint of differential diagnosis. Next follows the outcome of the case and operation or autopsy, when done, as proving or disproving the positive or tentative diagnosis. The discussion brings out many interesting matters in Cabot's experience, as shown by his remarks on dynamic aorta, loss of teeth as a factor in dyspepsia, general signs of infection prior to the settling down of a local infection. One is especially impressed with that disturbing factor observed in our patients, and made evident all through this book, of the presence of one or more extraneous symptoms in each case which apparently have no relevancy or value whatever except to confuse. To these Cabot gives the term "wild or untamed facts." One may be occasionally forced after careful study to differ with the writer in his diagnosis, only to be unpleasantly shocked at the last line to find a note of autopsy or operation confirming the author's diagnosis. Nearly the whole domain of general medicine is covered in the various discussions on individual cases. One is pleasantly surprised to find the author so alive to the surgical aspects of his cases—not so common in an internist. There is no more engrossing or instructive occupation than reading such a work. One covers the author's diagnosis, makes one for himself and then looks for the answer. No more valuable books exist for the general practitioner than such as this. The book is a distinct addition to medical literature and reflects equal credit on the distinguished author and on Harvard.

WINSLOW.

A Manual of Physical Diagnosis. By Brefuey Rolph O'Reilly, M. D., C. M., Demonstrator in Clinical Medicine, University of Toronto, etc. Cloth. 360 Pp. Six Plates and 49 Other Illustrations. P. Blakiston's Son & Co., Philadelphia. 1911.

O'Reilly states in his preface that "An effort has been made to epitomize for the use of students, the various physical methods employed in the diagnosis of a medical case, and to as far as possible explain the origin and clinical significance of those described." An appendix on laboratory technic containing only common methods in every-day use has also been included. The book is another of those excellent clearly written works which our confreres across the line have been producing ever since the days of Professor Osler, at McGill. The reader will find in it just what is essential in physical diagnosis with nothing omitted. In no other small book on the subject in English does the reviewer remember finding so large a mass of essential information so clearly given and without repetition. The illustrations have been carefully selected to help the student over the hard places. Cuts of a number of Mackenzie's cardiograms and sphygmograms included in the chapter on the circulatory system form a valuable feature of the same. Dr. O'Reilly's book should be as popular with our embryo medicos as Siefert and Muller's "Taschenbuch" is among the German students. Every second year medical student should have a copy for his summer's reading and the junior and senior students will do well to provide themselves with it for handy reference.

HEAVENRICH.

Collected Papers by the Staff of St. Mary's Hospital, Mayo Clinic, Rochester, Minnesota, 1905-1909. Octavo of 668 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, $5.50 net.

In this book are the collected papers written during the five years prior to 1910, by Drs. Mayo, William and Charles, Graham, Plummer, Judd, Brasch, Beckman, Griffin, Guthrie, Henderson, Alice Magaw, Wilson, McCarthy and Andrews, all of the Rochester clinic. They are gathered in one volume for convenience of reference which is enhanced by the careful and complete indexing of contributions, subjects and bibliographic references. It is unnecessary to dwell on the value of many of these papers which have been epoch-making and are part of the history of medicine. Thus, the original operation of William Mayo for umbilical hernia and that of Charles Mayo for tumor of the urinary bladder are classical the world over. No Americans have done so much to advance the knowledge of chronic digestive disorders as Graham by his numerous papers on the diagnosis of gastric and duodenal ulcer, gastric cancer, gallbladder disease and chronic appendicitis, and William Mayo by his brilliant operative measures for the treatment of these conditions. The numerous articles by Charles Mayo on goitre only suggest the enormous number of successful operations he has done for its cure, making him the leading authority in this country on goitre. Plummer's monographs on esophageal lesions, as cardiospasm and diverticula, are classics and his original work in this field is unsurpassed by any living man. Judd's clever and brilliant operations on the head and neck are reflected in his papers. No one ever brought the art of anesthesia nearer to perfection than Alice Magaw, whose article contains many points of great practical value. The pathologic materials at the command of Wilson and McCarthy has been enormous and their writings have done much to advance our knowledge of living, in contradistinction to dead-house pathology.

WINSLOW.

Manual of Cystoscopy. By F. Bentley Squier, M. D., Prof. Genito-Urinary Surgery, N. Y.; Post-Graduate Medical School, and Henry G. Bugbee, M. D., Instructor Genito-Urinary Surgery, N. Y., Post-Graduate School. Pp. 117. Cloth. Illustrated with Diagrams and Colored Plates, $3.00. Paul B. Holber, 69 East Fifty-ninth Street, New York City. 1911.

This is a small book of 100 pages, on the technic of cystoscopy and ureter catheterizing. It treats the subject in an elementary manner and is for the beginner, really being supplemental to the author's classes in cystoscopy at the N. Y. Post Graduate Hospital. He goes over the history of the instrument, technic of cystoscopy, pictures of the normal bladder, pictures of the pathological bladder (diverticula, cystitis, prostatic hypertrophy, calculi, tumors of the bladder, and foreign bodies), and ureteral catheterization. The colored plates are good but cannot come up to the beautiful lithographic pictures in Rumpel's Cystoscopy. The whole book is devoted to the indirect instrument, technic and pictures; the direct view instrument, so popular in this country, is only mentioned. The various renal tests for insufficiency are omitted, also the diagnosis of ureteral lesions. Peacock.

International Clinics. Edited by Henry W. Cattell, A. M., M. D. Volume III. Twentieth Series. 1910. Cloth. Pp. 311. $2.00. J. B. Lippincott Co., Philadelphia and London.

In this familiar quarterly we find as usual many valuable contributions. The first is by our own Würdemann, on The Study of the Ideographic Cerebral Centre, with the report of a case of ideographic aphasia. It is suggestive and interesting. Among other noteworthy papers may be mentioned: The Treatment of Senile Gangrene by Superheated Air, by Dieulafoy, in which applications of air heated to as high as 392° F. to 1144° F. are made to the part for half an hour. The ordinary applications were at 572° F., given twice daily for a month. This cooking appears to have a remarkably good effect and the part is not baked to a crisp as one would imagine. There are some excellent articles on the care of the teeth and pyorrhea alveolaris. The short paper on Gastro-Intestinal Hormones and Their Significance, by Miller, gives one the latest knowledge on this important subject. Mueller's Action of Bacteria in the Peritoneal Cavity is most enlightening and of much practical worth. The book is up to the usual standard of this popular publication. Winslow.

Common Disorders and Diseases of Childhood. By George Frederick Still, M. A., M. D., F. R. C. P., Professor Diseases of Children, Kings College, London, etc., etc. Second Impression. Cloth. 731 Pp. London; Henry Frowde, Oxford University Press. American Branch, 35 West Thirty-second Street, New York.

The "common place and mainly every day" disorders and disease of childhood are here presented by one whose large experience furnishes abundant material for such a purpose. It is not a text-book in the sense of being a systematic treatise but rather suggests a series of very valuable and informal lectures. It is practical throughout, particularly in relation to diagnosis and treatment which receive chief consideration. The symptomotology of most of these conditions is extremely well handled. It would be hard to find a more accurate and complete description in so brief a space of hypertrophy of the pylorus in infants and tuberculous meningitis, than can be found in these chapters. It is a relief to see so much space given up to literature, a thing sometimes difficult to find in a mass of etiology, pathology and differential diagnosis. The easy and informal style makes reading throughout interesting . There is a need for such a book and it should have an extensive distribution. Manning.

Veterinary Aanaomy. By Septimus Sisson, S. B., V. S., Professor of Comparative Anatomy, Ohio State University, College of Veterinary Medicine. Octavio of 826 pages, 528 illustrations. Philadelphia and London: W. B. Saunders Company. 1910. Cloth, $7.00 net; half morocco, $8.50 net.

This new tex-book of veterinary anatomy will be an exceedingly valuable addition to any library. On page 18 the author notes the general descriptive terms used in the book which differ from those in common veterinary use, but are similar to those employed in human anatomies. Osteology occupies 178 pages. The numerous original photographic illustrations are clear and concise, all important points being carefully designated by names on the plates, and the descriptions are given with the utmost care. The muscular system is described and illustrated in 120 pages, the text being terse and to the point. To the illustrations obtained from standard German works the author has added many good originals. The digestive system occupies 120 pages. The text is supplemented by numerous illustrations of the organs, photogrphic reproductions illustrating the relations of the abdominal organs in situ, and are the best that have appeared in any work on veterinary anatomy The anatomy of the vascular system adds another 120 pages to the volume. The author has carefully selected and prepared the numerous new and beautifully executed illustrations, the descriptive terms adopted are concise and convenient and a large number of works of accepted authorities have been laid under contribution. The book required an immense amount of work in its preparation and is today the only up-to-date veterinary anatomy published. Schultz.

Bacteriology and Surgical Technic for Nurses. By Miss Emily M. A. Stoney. Third edition, revised and enlarged by Frederick R. Griffith, M. D. 12 mo. of 311 Pp., with 204 illustrations. Philadelphia and London; W. B. Saunders Company. 1910. Cloth, $1.50 net.

This is generally an excellent book for nurses, being written in clear, plain language and containing the more important matters pertaining to the subject. The writer should be more detailed in some cases, as in catheterization, where no mention is made of washing the hands and wearing gloves or of the method of cleansing the patient. A catheter infection is often much worse than the trouble for which the patient has been operated upon. Also a description of Murphy's method of enteroclysis by the drop method should be included as we are dependent on the nurse for its proper administration.

Winslow.

New-World Science Series, Primer of Hygiene. By John W. Ritchie, Professor Biology, College of William & Mary, Virginia, and Joseph S. Caldwell, Professor Biology George Peabody College for Teachers, Tennessee. Illustrated by Karl Hassmann and Hermann Heyer. World Book Co., Yonkers-on-Hudson, N. Y. Cloth, 184 Pp., 48 cents 1910.

This book puts in language easy to understand and in an up-to-date manner the facts of hygiene and sanitation. It is written as a text book for children of the fourth and fifth grades. The illustrations are numerous and attractive. It is a book which should be a strong force in a better understanding of personal hygiene and preventive medicine by school children. Manning.

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The Journal of the State Medical Associations of Oregon, Washington, Idaho and Utah

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DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF THE PACIFIC NORTHWEST
Subscription Price $2.00. In clubs of twenty or more $1.00.

Entered March 14, 1903, at Post Office, Seattle, Wash., as Second Class Matter, under Act of Congress of March 3, 1879.

VOL. III. New Series. MAY, 1911 No. 5

ORIGINAL CONTRIBUTIONS

VALUE OF INDICAN AND BILE TESTS IN DIAGNOSIS OF ABDOMINAL DISEASES*

By Gustav G. Baar, M. D.,
PORTLAND, ORE.

We are all aware of the confusing symptomatology of the diseases of the digestive tract. We all recognize the immense importance of an early diagnosis of gallbladder and bileduct diseases, when we consider the serious sequelae, i. e., purulent cholangitis, pancreatitis, carcinoma of the gallbladder, etc. The physician who diagnoses gallstones only when the classic symptoms of a gallstone impaction appear is guilty of gross neglect. And still 80 per cent. of all gallbladder diseases do not show any of the characteristic symptoms but remain unrecognized on account of their general vagueness.

Let me enumerate some of the symptoms patients complain of, who, when operated upon, were found to have gallstones:—chronic cholecystitis or pericholecystitis, gas in abdomen, painful sensation in epigastrium, paroxysms of nausea, flatulence at the level of the umbilicus before and after eating, bad taste in mouth, lack of appetite, painless vomiting, bloating and borborygmus accompanied by pain in the right chest muscles, burning in stomach and along the sternum in nocturnal paroxysms, painful sensation at the ensiform process which is not relieved by eating, constant sense of hunger, paroxysms of gas and pain in the region about the umbilicus, radiating towards the appendix, burning sensation in the region of the pylorus with colicky pain radiating along the left rib arch accompanied by vomiting, desire for defecation which is relieved by jarring, constant desire to expel gas by the rectum, nausea and faintness from a sensation of hunger and still unable to eat, waking up in the morning with gas in the stomach, unpleasant sensations in the lower right abdomen and right hypogastrium radiating into the right posterior chest region, matutine painless vomiting, rolling pain in the region of the gallbladder radiating down the ascending colon and appendix relieved by eating as well as by walking, though the pain at the right rib arch remains always constant, paroxysms, especially at night time, of burning in epigastrium, flatulence above the umbilicus in paroxysms of 3 to 4 days duration, not being relieved by eating or by magnesia, feeling of fullness across the epigastrium appearing in periods of several days duration, especially after meals and then disappearing again for a time, a sinking feeling in the epigastrium on waking up.

The row of uncertainty as to diagnosis explains our desire to arrive at some definite laboratory tests which would enable us to make a more positive diagnosis before proposing laparotomy to the doubting and therefore unwilling patient.

While I was looking for such tests a patient of mine, in November, 1909, underwent an appendicostomy for the purpose of having the colon irrigated. This patient showed on four days following the operation excessive indican in the urine and a distinct green ring of bile with the Gmelin test. These findings aroused my curiosity because I had tested the patient's urine innumerable times for indican and bile before the operation, but never found any present. I could not explain the presence of bile and indican either by vomiting or by intestinal disturbances at that time. I then decided to test every patient's urine for bile and indican repeatedly before and after any operation performed. From the thousands of tests made thus I came to the following conclusions:

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*Read before Portland City and County Medical Society, Portland, Ore., January 18, 1911.

(1) The anesthetic, whether it be ether or chloroform, has no influence whatever upon the appearance of indican or bile in the urine.

(2) When the gastrointestinal wall is cut, like in gastro-entero-anastomosis, appendectomy, cholecystostomy and entero-anastomosis, there appears always for the next three, four or five days a distinct bile reaction, though the urine does not appear to the naked eye to contain bile.

(3) After laparotomies there appears a distinct bile reaction only when, during the course of the operation, there is considerable trauma to the intestinal wall, like pelvic operations in which the adherent intestines had to be separated.

Indican—and this is conceded by most authors on this subject—always indicates abnormal proteid-putrefaction within the intestines. I knew from my former experiences—for I have made about 36,000 tests for indican in the last four years—that indican per se, even if it appears constantly in excessive quantities in the urine, is not associated with bile in the same, provided there be no anatomic lesion of the gastro-intestinal tract present. This fact is proved by twenty cases of purely intestinal auto-intoxication in which the urine has been tested for several months from thirty to sixty times in the same individual and always showed an excessive amount of indican but never gave any positive bile reaction. Among these cases there are a few who have undergone an operation for appendicitis, in whom the appendix has been removed, from one to seven years before they came to me, by surgeons who did not find any other lesion in the abdomen. These twenty cases of intestinal auto-intoxication are, by the way, the only true intestinal auto-intoxication cases which I have found in my indicanuria studies on more than 6,000 patients.

A lesion of the intestinal wall seems to be absolutely necessary to cause the appearance of distinct traces of bile in the urine. This claim is proved further clinically by the numerous cases of gastro-enteritis and ulcerative colitis with excessive indican and distinct bile in the urine. The excessive indican only denotes the abnormal formation of putrefactive products like ptomains, leukomains, etc., within the intestinal tract. These latter toxins, however, enter the portal vein only when there is a lesion in the protective mucous lining of the gastro-intestinal tract.

I further support this claim by the following facts:

(1) Cushing introduced bacteria into the blood and found them in the bile later.

(2) The bacteria causing cholecystitis are not those found commonly in the duodenum.

(3) If an artificial enteritis be caused in an animal and the latter fed some easily recognizable organisms like bacillus prodigiosus, the organisms can often be demonstrated in the bile passages.

Thus it will be easily seen that the infections of the biliary tracts, with a consecutive appearance of distinct traces of bile in the urine, take place more frequently by the way of the portal vein than by the common duct.

In most all cases which gave a positive bile reaction, besides constantly appearing excessive indican, there was always present an anatomic lesion of the gastro-intestinal tract, to-wit: ulcer of the stomach, ulcer of the duodenum, chronic appendicitis, tuberculous peritinitis, cholecystitis, etc. The fact that in constipation cases, and I have tested hundreds of them, indican was present only in those where there was present at the same time gastroptosis or nephroptosis, suggested very vividly the explanation of its presence. The colon in these cases dangles festoon-like in the abdomen; the feces accumulating thus in the transverse colon acted as a trauma to the latter, and, as I stated above, mechanical trauma of the intestinal wall will produce putrefaction within the bowel owing to the injured proteolytic action of the mucous lining.

Basing my view on this clinical as well as quasi-experimental evidence, I was able to diagnose four cases of peri-cholecystitis adhesiva. One case concerned a man who gave only vague symptoms somewhere in the abdomen of the nature described above. The anamnesis brought forth the history of an icterus some twenty years ago. The man had been considered a neurasthenic by one of our best surgeons. Testing his urine frequently before and after the attacks ot pain of which he complained and finding repeatedly excessive indican and distinct traces of bile in the urine, excluding at the same time any lesion of the stomach proper, I made the diagnosis of pericholecystitis which the surgeon mentioned above proved by operation. Since the adhesions between the gall-bladder and colon have been removed and since the chronically inflamed appendix, also found, has been removed, the patient has had no actual pain in his abdomen, though he still remains a neurasthenic.

Another case concerned a woman whose whole gall-bladder was adherent to the colon and had to be excised entirely. The third case concerned a woman who had a great many adhesions between the pylorus and gallbladder and between the liver and ribs. As an explanation of the appearance of distinct traces of bile in the urine of these cases, I merely suggest the possibility of the colon, by its peristalsis, kinking the bile duct, thus causing temporary entrance of the bile into the blood.

The importance of the bile test in all abdominal ailments was made clear to me in the case of a young boy who was brought to me with the statement that he had some pain around the umbilicus. His temperature and pulse were perfectly normal. The surgeon who saw him hesitated to operate. When I found, however, that the urine contained excessive indican and distinct traces of bile, I insisted upon an operation which revealed a gangrenous appendix embedded in the omentum.

Another similar case concerned a middle-aged man who called at my office complaining of indistinct painful sensations in his right hypochondrium. I gave him expectant treatment. A few days later he came again, complaining about the same. The urine test showed excessive indican and distinct traces of bile. The operation revealed a dark green discolored gangrenous appendix. His temperature and pulse were normal.

Bile appears in the urine, however, under various conditions, as, for instance, in all diseases which cause a sudden increase of the intra-abdominal pressure. Increased abdominal pressure produces increased bile pressure within the gallbladder and the bile passages; the liver cells are separated and the bile is forced into the lymph channels or directly into the blood; hence, it appears in the urine. Thus we can explain the distinct green ring of bile seen in the normally appearing urine of the patients who suffer with vomiting in the course of their migraine paroxysms, or the bile ring in the urine of a physician who vomited in the beginning of a tuberculous meningitis, himself mistaking his ailment as a stomach disease, though the Ewald test showed no abnormality whatever in the stomach (nor did the post mortem test show any abnormality therein), or the vomiting of a hysterical patient who imagined she had swallowed carbolic acid.

The bile in the urine is very apparent to the naked eye when resulting from an obstruction of the common duct. It appears in cases of catarrhal jaundice one or two days before icterus becomes plainly visible in skin or conjunctiva. (This fact is also mentioned by Osler in his Practice of Medicine.) Think of the psychic value to the patient of your diagnosis, when you predict jaundice to one who took sick with fever, vomiting and pain in the epigastrium, though there be no discoloration of the cornea visible as yet! The timely bile-test of the urine has gained for you the confidence of the patient and at the same time enabled you to treat the disease correctly before icterus has fully developed.

Incidentally, I wish to remark that the absence of bile from the intestinal tract does not seem to increase the putrefaction in the latter. This statement is entirely contrary to the prevailing opinion. My numerous tests for indican in the urine, as well as in the feces of patients whose intestinal tract contained no bile whatever, very often showed no indican in the urine or feces, which means no putrefaction. This is found in patients after cholecystostomy with complete occlusion of the common duct, when all the bile drained outside. Further, I found it in cases of icterus, when the urine was loaded with bile, the stool clay colored and still there was no indican present in the urine. In other words, the absence of bile from the intestinal tract does not mean increased putrefaction.

The importance of indican and bile tests may be well illustrated by this case: A lady came to my office complaining of nothing, but wished to know why she had to take a glass of milk before going to bed. Whenever she omitted to do so she could not sleep. Repeated examinations of urine showed always excessive indican. Several times I found bile. I discharged the patient with the statement that she did not need my services, but she should think of her gallbladder in case she ever suffered with any intestinal disturbance. A few months later she called on me, stating that one day she was seized with extreme colicky pain in the epigastrium and vomiting; icterus developed next day. Both her physicians diagnosed gallstones and she thought it her duty to report this to me.

In conclusion, I wish to ask this practical question: If patients come to us and we find on stomach examination a state of hyperacidity, how are we going to know whether this is a case of nervous hyperacidity, belonging clearly to the internist, or whether it be a case of hyperacidity due to some extra-gastric lesion, like gallbladder or appendix trouble? The following is my answer: The cases of nervous hyperacidity do not show constant excretion of excessive indican in the urine while the extra-gastric hyperacidity always show the same.

If we further test for bile and consider at the same time the anamnesis, for instance, a previous icterus, we shall in most cases be in a position to determine whether or not the case referred to belongs to the physician or to the surgeon. If my efforts have convinced you that the routine examination of the urine for bile and indican will aid us in determining whether a case is a medical or a surgical one, I will feel fully rewarded.

THE CONSIDERATION AND IMPORTANCE OF EARLY RECOGNITION OF ERYSIPELAS. MISTAKES IN DIAGNOSIS. ITS RELATION TO OTHER TYPES OF SIMILAR DISEASES. REPORTS OF CASES.*

By Heber E. Robinson, M. D.,
AMERICAN FORK, UTAH.

It is not that I have anything new to report on the subject of erysipelas, but I believe we should occasionally be reminded of some of the things we have previously heard of or seen, to enable us to recognize the thing when presented to us again. Therefore, I beg your indulgence while presenting a few points on the subject of erysipelas, with which we come in contact when least expected, and serious results happen before we are aware.

Erysipelas, or the old name, St. Anthony's Fire, is an old disease and, since bacteriology and germ life have been given to us in such detail, it has been recognized as a germ disease through infection and highly contagious. It is not, in the true sense of the term a specific disease, since it may be produced by a variety of organisms, and these are capable of producing other diseases in other parts of the body, the chief factor being one of the organisms of the streptococcic group, of which the streptococcus pyogenes is the most common. It develops rapidly in the capillary lymphatics and small lymph channels of the skin, and subcutaneous cellular layer and also the lymph channels of the serous and mucous membranes.

Being of the streptococcic origin, it develops rapidly, as is shown from experimental inoculation where, in from fifteen to sixty hours after injection, a well developed case of erysipelas is observed. The rapid spreading is due to the fact that streptococci prevent coagulation of exudate, and are not actively attacked by leucocytes.

None are too young or two old to be infected; neither does one attack produce immunity; on the contrary, a person having once suffered an attack is more susceptible to a recurrence from the fact that his opsonic index has been lowered, therefore less resistance. This is well borne out in the fact that those suffering from inanition, poverty, exhaustion, overwork, previous illness, chronic poisoning, cachexia, etc., are affected more frequently than persons in perfect health.

Erysipelas is always preceded by a break in continuity of the skin or mucous membrane from a wound, a scratch, or an abrasion, which may have been trivial and may never have been noticed. The prick of a pin, the pulling out of a hair, especially from the nose, or tearing of a nail is sufficient entrance.

In erysipelas beginning on a mucous surface, it may be caused from picking of the nose, ears, or rubbing the eyes, scratching the anus or vulva, or following parturition where mucous membrane has been torn. Where there is no apparent point of infection, it has been spoken of as idiopathic, and following operations as surgical erysipelas, but of recent years no distinction is made as to variety. The appearance of the disease at distant points from the seat of the disease is proof positive that the organisms may be transmitted from one part of the body to another, either by the lymph channels or the general circulation. J. Collins Warren says it is also possible that the organisms may gain an entrance through the lungs or digestive tract and an intravascular infection may thus be produced. The healthy, uninjured skin or mucous membrane undoubtedly offers a sure protection against infection from erysipelas.

In the eighteenth century extensive epidemics of erysipelas visited Europe; France in 1750, and Great Britain in 1777. In the nineteenth century epidemics are also recorded in these countries as well as in America. The epidemic in New England, in 1842-43, was of a most malignant type. It spread from village to village in a manner unknown at the present time, and was accompanied by those deep suppurations seen only in the severest forms of phlegmonous erysipelas, not only the subcutaneous tissue but even the muscles being dissected away from their surroundings by the burrowing virus. Since that time, outside of hospital wards, we hear little of epidemics of this disease.

The old method of arm to arm vaccination produced small epidemics. Dr. Oliver Wendall Holmes was the first to call attention to the close relationship of erysipelas to puerperal fever. An excellent illustration of this was given in a certain hospital where an attempt was made to break up an epidemic of puerperal fever. The puerperal ward was abandoned for this purpose and converted into a skin clinic, in which erysipelas promptly appeared.

J. Chalmers Da Costa classifies erysipelas according to form as follows: ambulant, migrating, or wandering, which is the form that tends to spread widely over the body, leaving one part and going to another. Bullous erysipelas is attended by the formation of bullae; in diffuse the borders of the inflammation gradually merge into healthy skin; erythematous involves the skin superficially; metastatic appears successively in various parts of the body; puerperal begins in the genitals of a lying-in woman; erysipelas neonatorum begins in the unhealed navel of the newborn child and spreads from this point. Cellulitis is often erysipelas of the subcutaneous layers;

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*Read before the Sixteenth Annual Meeting of the Utah State Medical Association, Salt Lake City, Utah, Oct. 3-4, 1910.

phlegmonous erysipelas involves the skin and cellular tissue causing suppuration and often gangrene; lymphatic is characterized by rose-red lines due to lymphangitis; mucous involves the mucous membrane.

Of all the varieties, facial erysipelas is the most common, beginning at the angle of the eye, nasal orifice, external auditory meatus, or angle of the mouth. In any form constitutional symptoms and disturbances usually begin before the local symptoms manifest themselves. These are sense of gastric oppression, malaise, and possibly at night some delirium; usually a chill or chilly sensation followed by rapid rise of temperature which may reach 104° of 105° F. When it begins in an open wound these symptoms appear from twenty-four to seventy-two hours before any change occurs in the appearance of the wound, but occasionally the general symptoms are so slight as to pass almost unnoticed and then the earliest signs are seen in the wound itself.

By far the most characteristic feature of the disease is the inflammation of the skin. It is recognized by an increased feeling of tension in the wound, with increased heat, and usually with an itching or burning sensation. There is diffuse redness and swelling more or less uniform at the center but at the edges showing a zigzag irregularity of outline, like the burned edge of a piece of paper. As the inflammation increases minute vesicles are found in great numbers. When these run together it causes bullous erysipelas, these bullae being filled with a yellowish serum which may become purulent. The smaller vesicles dry and cause yellowish scabs, therefore the desquamation. This material, containing as it does the organisms, is undoubtedly a prolific source of contagion.

Beginning at the seat of origin, the inflammation spreads in various directions with the outline well marked, and a fading away of the redness and inflammation leaving scabs on the area covered. The width of the red spreading line varies, but is usually from one-half to one inch. The general direction of spreading is, when on the extremities, toward the trunk; when on the face, toward the scalp. It may return to a part after once having left.

Facial erysipelas gives more and severer symptoms than on any other part of the body. Delirium is more pronounced, which is due to irritation of the cortex of the brain rather than by congestion. The severe pain is due to the great resistance of the scalp with little stretching. Facial erysipelas may become phlegmonous and orbital suppuration may occur with infection of the eye itself. Blindness is a not infrequent result of such complications. Septic meningitis may follow any severe form, as was the result of a case under my care.

Although fever usually precedes and accompanies the disease, W. C. Macauley, in the *British Medical Journal,* Feb. 26, 1910, reports two cases of non-febrile erysipelas. He states that they appeared anomalous in the fact that both, for the most part, had subnormal temperatures and in both the cerebral symptoms were early and profound, probably due to the fact that there was very little resistance on the part of either patient to combat the disease, one being an elderly man of enfeebled constitution and the other an infant three weeks old. In the old man diarrhea was present, constipation being the rule. During the last four days before death, the temperature ranged from 97° to 97.6° F., that of the child being 97° F. Both cases died.

Phlegmonous or cellulocutaneous erysipelas gives signs of great prostration, irregular chills, sweats and a strong tendency to delirium. The constitutional condition may be one of suppurative fever, sapremia, septicemia or pyemia. The parts are red and the tumefaction is vastly great, the swelling comes on early, increases rapidly, causes a high degree of tension. In most cases suppuration occurs. These lesions may begin in lymphatic glands and the preceding symptoms should be regarded as possible erysipelas until proven otherwise, for fear of other exposures.

A very striking example of this I saw presented by a very prominent pediatrist. The case was of a little child with greatly enlarged submaxillary gland on the left side. It was diagnosed as suppurative adenitis and referred to a surgeon for operation. At one glance the surgeon recognized it as phlegmonous erysipelas and removed it to a place of isolation for operation.

Phlegmonous erysipelas very closely resembles cellulitis, both being microbic inflammation. Cellulitis may be due to staphylococci, streptococci, or other pyogenic bacteria or to mixed infection. The commonest form is streptococcic and Da Costa says this is a form of erysipelas. Cellulitis is prone to arise in damaged tissue, for instance, in a crushed part, a limb, the seat of a compound fracture, a felon, or tissue containing extravasated urine. The swelling is not so marked as in phlegmonous and the redness is darker and less distinct than in cutaneous erysipelas. The redness of cellulitis is about the wound; it spreads but does not fade at the center as does ordinary erysipelas; red lines, due to lymphangitis, ascend the limb from the infected wound, and the anatomically associated lymphatic glands enlarge.

Cases of chronic erysipelas are reported, where the disease subsides for a time and reappears possibly at the same time of the year as before, this being usually in the spring. In such cases there is an elephantiasis-like thickening of the skin.

The diagnosis between a case of facial erysipelas and poisoning from poison ivy or poison oak may be at first difficult, but the history of exposure may be obtained. If not, the general systemic symptoms in the poison case are absent; the pain is not so severe, the swelling more of a puffy nature, delirium absent and the spreading line of inflammation not to be found.

The most common complications in erysipelas are suppression of urine, broncho-pneumonia, congestion and edema of the lungs. Pericarditis and endocarditis have also been reported as complications, and the specific germ has been recovered from the blood and from the serous fluid in the pericardium. P. Tussier, of Paris, reports in examining 345 cases of erysipelas to have found acute dilatation of the heart in 11 of 145 males, and in 33 of 200 females.

On the other hand, attacks of erysipelas are reported to have produced beneficial results to the patients. Chronic skin lesions, as tubercular nodes, disappear; old ulcers and sinuses that have resisted treatment are stimulated to healing; old neuralgias get well, and Tillman and Coley report recovery of sarcoma and carcinoma following phlegmonous erysipelas.

As to treatment, some one has said that the drugs reported to be used and beneficial in erysipelas are as numerous as the drugs that could be pasted on the human body. So far nothing specific has been found. What is helpful to one has no influence on another. The milder types of cutaneous erysipelas in a healthy individual will get well without treatment, but the same type in a debilitated person may cause serious complications or death.

As soon as a physician sees and recognizes a case of erysipelas, the patient should be isolated, the wound asepticized, if there be one, and a purgative administered. A nourishing and easily digestible diet is of great importance, and it is probable that good nursing has as much to do with the successful treatment as any of the favorite methods. Stimulants are necessary, especially in debilitated persons, and nothing is better than brandy to a point of toleration and safety. If prostration be apparent, use normal salt either hypodermically or by the Murphy method.

Internal medications consist of restoratives as iron and quinine. Tr. chlorid of iron is recommended in 20 to 40 m. doses three or four times daily. For sleeplessness or delirium chloral hydrate and the bromides are best. For high temperature cold sponging is required. Antipyretics have little influence on the temperature and are contraindicated, owing to their depressing influence upon the heart action. The serum treatment is recommended but is not specific.

The number of salves, ointments, and lotions recommended is legion. To prevent spreading some have recommended the injection of the healthy skin near the inflammation with a 2 per cent. carbolic solution, or with a 1-2000 corrosive sublimate solution. The parts surrounding the inflamed area have been painted with tr. iodin but I have found no benefit from its use. Kraske recommends free scarrifying of an area adjacent to the spreading inflammation, allowing oozing, then soaking the parts for one hour with a 1-20 carbolic solution or 1-2000 bichlorid. This operation is for the purpose of forming a protective barrier of leucocytes. This has proven beneficial in many hands.

Cooling solutions act better than hot in cutaneous erysipelas, and one of the best is lead water and laudanum applied on gauze and kept moist. An ointment of 50 per cent. icthyol in lanolin gives decidedly good results, being antiseptic, and the icthyol relieving the burning pain by acting as local anesthetic. I have applied all of the recommendations mentioned excepting scarrifying, and have found none of them specific, but in a series of six cases I followed the recommendation of Bludgett, of Boston, with decided benefit.

His technic is as follows: Wash the healthy skin surrounding the spreading area for a space of several inches with ethereal soap, followed by a 1-10 of 1 per cent. bichlorid solution in ether, followed by alcohol; allow to dry and paint a band two inches wide surrounding the spreading disease with ethereal collodion. Apply the collodion thickly and at least two inches ahead of the red margin, because the disease is beginning before the redness appears. The collodion, upon drying forms a tight band of an antiseptic nature, thereby shutting off the cutaneous lymphatics and capillaries and prevents spreading. If the collodion cracks or peels off, paint another coat. If the inflammation crosses the painted line, apply another two inches back. A second application has been necessary in but one of my cases. I have never tried this method in facial erysipelas but I believe it could be used with equally as good results, providing the disease had not reached the scalp.

In the treatment of phlegmonous erysipelas, at once asepticize and drain any existing wound and dress such a wound with hot antiseptic fomentations, of which mercury bichlorid 1-2000 is best. The inflamed lymphatic glands near by may be painted with iodin and blue ointment applied, or rub in Crede's ointment of soluble silver. Make numerous incisions into the inflamed tissue, spray the wound with hydrogen peroxide and wash with 1-1000 bichlorid solution. Dress with many layers of moist bichlorid gauze and cover with oiled silk or gutta percha tissue and apply a hot water bag. Change the dressing often. It is seldom that the lymphatic glands near by need incising. Antistreptococcic serum may be employed. In severe cases employ hypodermoclysis or saline infusion into a vein. In any degree of prostration in any of the forms of erysipelas the Murphy method of saline solution into the bowels should be the first thought.

A physician in attending a case of erysipelas should always go prepared with a gown, rubber gloves and antiseptics. Be as cautious as though visiting a case of smallpox or scarlet fever. Best to have a nurse do all dressings, catheterization, etc. Where this is not practicable and gloves and gown not worn, a physician attending a case of erysipelas should never attend a woman in confinement, should not attempt a surgical operation or do a surgical dressing without a most thorough scrubbing up and then the wearing of gloves.

A very interesting case came under by care some few months ago. An elderly lady about 75 years of age developed a red, spreading, burning patch on the calf of her left leg. Neighbors called in to render assistance and, after a consultation of the more talkative ones, they decided the trouble was inflammatory rheumatism and that vigorous rubbing and a massage by a strong healthy person was the best method of treatment. They decided upon a vigorous young widow in perfect health, who possessed more electricity than others to carry out the treatment. She called twice daily and administered the massage, with her strength passing into the frame of the elderly, enfeebled woman. In spite of the rubbing the inflammation extended until the leg was encircled up to the knee; then consultation decided upon medical advice. It was a plain case of cutaneous erysipelas which never crossed the collodion band and pain ceased upon applying icthyol and lanolin, 50 per cent.

A child of one year referred for operation for removal of a large cyst tumor on the right side, extending from the tenth rib to crest of ileum. Tumor removed and all went well until the tenth day, when the stitches had been removed and wound looked healed. The child began to be restless, feverish, vomited, and in two days the wound showed signs of infection but no pus was present. Upon opening the scar, the edges gaped and looked raw, tumefaction became as great as before operation, local temperature increased, general temperature ran to 103½°. After thirty-six hours the line of rapidly spreading erysipelas was plain. Iodin painting,lotions, ointments proved futile. The condition covered the entire trunk and to the neck, started down the arms and legs but did not cross a thick collodion band in any place. Convalescence was delayed and in five weeks the child died of septic meningitis which was unquestionably of erysipelas origin.

Immediately following the dressing of the wound, one day, before the positive signs of erysipelas were present, I circumcised a boy of five months upon the same table where I did the dressing. In five days erysipelas began in the cut edges of the prepuce, extending over the penis, across the perineum and buttocks and over the pubes at a rapid rate. The temperature in this case never exceeded 102°. The best results were obtained in this case following the collodion dressing. Recovery was rapid and desquamation was complete in a few days.

THE EYES AND EARS OF SCHOOL CHILDREN.*

By Frederick A. Kiehle, M. D.,
PORTLAND, ORE.

Sight and hearing are the two principal senses of the human body. They are the great routes along which must come most of the child's knowledge. They are the highways of entry to his brain. The more clearly he sees and the more distinctly he hears the clearer are the impressions he gains of the outside world and the more definite is his knowledge. Picture for a moment the mind of the infant,—a perfect blank, without consciousness of the outside world. Around and about him lies the endless realm of life and its experiences, of impressions that await him, and of sensations he is to acquire. Sight and hearing are the two chief channels of travel to his mind. Let either of these two channels be blocked, either of these two senses become impaired, and his sensations are correspondingly impaired.

Many a child is considered stupid who is working along as best he can under this handicap of poor vision and poor hearing. What he sees is with difficulty. What he hears is indistinct and by dint of trying to hear. The result of this is that at the end of the hour's work or of the day's work, he has gained what he has gained only at the expense of much nervous energy, and he yields to fatigue sooner than his playmate who rejoices in perfect senses.

I say many a child in considered stupid who is merely unfortunate in not possessing the normal amount of sight or hearing. Once give a child this bad name, increase his embarrassment and his consciousness of his inferiority and you have done him a lasting and an irreparable wrong. These are often children of poorer parents to whom every month of schooling means much. Though nature has endowed them with as keen minds as their companions, still, suffering discouragement after discouragement, they are prone to give over their schooling at even an earlier period than would otherwise be necessary. We have done them wrong. Hazy impressions contribute to the formation of hazy memory, and these experiences happening, not once but daily and many times a day, the child's whole life through school and afterwards, suffers by reason of a deficiency by no means his fault. The teacher, perhaps inexperienced and untrained in the art of analysing the child-mind, is prompted to classify her pupils on these insufficient grounds as "bright" or "dull."

We are guilty of two false assumptions in dealing with children as a class. We first assume that they are all possessed of equally acute senses. We see the mistake of this on making the most hasty and cursory tests. The second is that we assume that the child knows whether he sees and hears well or as well as his playmates. Pride alone, even if he knew, would lead him to assure us that he is not outdone by his companions. But, as a matter of fact, he does not know and has no way of discovering, except perhaps by accident, that he is not getting his share of sights and sounds. Sometimes the child reaches adult life before making this discovery. Only the other day a man said to me, "Should I be able to see things distinctly and clear-cut?" And on my assuring him that he ought, as this is the boon of the normal eye, he replied, "Well, I never have. I see things, but they are indistinct and blurred. I think I have missed a great deal in life, and haven't had all that was coming to me." He had missed a great deal. Think of not finding out till one is forty that one is entitled to see things distinctly and without effort, as this man would have done had his refractive error been discovered and corrected during his school years.

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*Read before the Oregon State Medical Association, Sept. 7-9, 1910.

It is only within the last few generations that the general public, as represented by the state, has taken in hand the matter of the education of its children. It has found that in the end it has been responsible for the care of all degenerates and incapables. The weak-minded, the insane, the criminal, the helpless among the blind, deaf and cripples, have fallen upon the state for support. To guard as far as possible against the increase of the number of dependents the state says its children must be educated. Hence the laws for compulsory education of all children of school age during a certain number of months each year.

Of late years we have come to realize that mere compulsory attendance at school is not enough to insure results. The child's mind must be in a receptive condition to absorb and appropriate the lessons that are brought to it. The period of school life is short at the best. If by reason of poor health the pupil can attend only a part of the time, or if, when he does attend, he gets but partial benefit from his education by reason of poor receptive faculties, just that much of the state's effort to make him an intelligent and self supporting citizen is lost. So today in many localities there has been provided regular and thorough physical examination of all pupils. The teachers themselves are urged to be on the watch for signs of physical ailments in the children. I am glad to say that Portland has recently established such a plan of systematic physical examination of school children. At regular intervals the school medical inspectors, regularly licensed and practising physicians, visit each school and make their examinations, giving especial attention to the cases that have been noted by the teacher. Aside from the fact that in this way infectious diseases are detected early and perhaps broad spread contagion is prevented, many cases of poor eyesight that can be improved by properly fitting glasses are discovered, and many cases of poor hearing that can be remedied are brought to light.

In the larger cities of the East, where these tests have been made with regularity and care for a number of years, it has been found that the mental efficiency of the children examined is in direct ratio to the degree of sight and hearing they possess. In other words, that the children whose sight or hearing is bad are among the poorer scholars of their classes. It is a common observation that many a child, who has been thought dull and stupid by teacher and parents and schoolmates alike, has been transformed by the proper treatment of his troubles into a bright and capable scholar.

In speaking to mothers and teachers it would be well if the general practitioner would upon every occasion urge upon them to see that the child uses his eyes only under proper conditions. First, is the matter of proper light. There is no light equal to sunlight. This should come well diffused, however, and not shining brightly on the child or on any smooth surface near, from which it may be reflected into his face. Neither should his book be partly in the sunlight while the rest of the page is in shadow. Nor should the sun be shining on the wall where it can be reflected into his face. The reason for this is that, as the child reads, only a small part of his retina is in use, and if light be shining into the eye and onto the rest of the retinal surface the eye becomes quickly tired.

Next to sunlight a good artificial light, strong, clear, white and well diffused, is to be preferred. Probably our incandescent electric lights with frosted bulbs are the best of these, and our ordinary gas jet with its fitful yellow flames and irritating vapors the very worst. Good ventilation of the rooms is a matter of importance. Air that has been breathed over and over contains irritating gases that harm the conjunctiva. The school room should, of course, be kept as free as possible from chalk dust. The book from which the child is reading should be directly before his eyes at about thirteen inches from his face. If there be a tendency on his part to get his book or paper much closer than this, or if he squints or blinks or makes any other unusual effort to see the words on the printed page, or to see matter that is written on the blackboard that he should see with ease from his seat, the probability is that his sight is defective.

Eyestrain is the most common cause of headache in children and may come without apparent reference to any overuse of the eyes. It may be located near the eyes or in parts of the head away from them. It warns us that too great tension is being placed on some part of the nervous system. A slouching, lounging posture in reading may bring about marked eyestrain. The head bent forward with the chin resting on the breast obstructs the return flow of blood from the head. Any congestion of lids or conjunctiva, however slight, itching of the lids, burning of the eyeballs, and styes, singly or in crops, should call our attention to the necessity of careful and efficient examination into the refractive condition of the eyes. They are danger signals, and it is a fundamental principle in dealing with the eyes to eliminate first of all any possible refractive error.

Mothers are often alarmed on noticing that the eyes of their infants are crossed. This is not unnatural for babies during the first few weeks of life. If it continue after the fifth or sixth month, it is probably an indication that there exists a considerable error of refraction. Proper glasses will usually correct such a strabismus up to the age of five or six, After this age amblyopia develops, glasses have little effect in straightening the eyes and resort must be had to surgical means.

Babies should not be given small playthings nor encouraged to look at small objects. Keep all objects well away from the faces of babies. Induce them to look off rather than at things near them. Give them big dolls and big balls and large pictures held at a little distance, rather than tempt them to see the details of smaller pictures held near their faces. The school age is altogether early enough for children to concentrate their vision on objects as small as letters in a book.

From the standpoint of the health of their eyes, it would be well if the school life did not begin until the age of eight or ten. And despite the many benefits to be derived from kindergartens, it is certain that in many cases they do the child more harm than good by reason of this very thing, viz, compelling the child to look intently and continuously at the small objects used as gift-plays. Especially must we condemn plays that consist of threading colored worsteds and fine silks into holes pricked into cardboard. Such efforts as these, especially when long continued, can result in permanent and serious harm to the little toiler.

A final suggestion is applicable to every one alike, from the child at play to the adult man reading his morning paper. Seeing in the distance or even the length of the room involves no strain on the normal eye. While looking at such a distance the tiny ciliary muscles are at rest. But upon looking nearer the muscles must contract and the eyes must accommodate. Thus all the time we are looking at near objects our eyes are under more or less strain. This strain ought not to be continued for more than a few moments at a time. By glancing up for an instant when we turn our page the eye muscles can in that instant relax and are again ready for renewed effort. But keep them steadily and relentlessly at work while we pore over page after page or sew stitch after stitch and, like all other muscles of the body kept long in one position, they suffer from fatigue and are weakened. So the thoughtful mother and teacher will arrange the child's work so that he is not using his eyes on near work for any length of time.

These are but a few of the suggestions that we can make to those who have the charge of children, but they are all important. Our eyes are faithful servants, and stand a vast amount of hard usage and even abuse. When they are healthy and treated with consideration we are hardly aware that we have them. Mistreated, they can cause an immense amount of trouble and almost any symptom that calls our attention to them is a warning that we are abusing them.

Practically 90 per cent. of all ear troubles in children are the result of adenoids. Eustachian tubal catarrhs, middle ear abscesses, discharging ears, and catarrhal troubles of nose and throat may in the great bulk of cases in children be laid at the door of these growths, coupled often with enlarged or diseased tonsils. Left to themselves they may further produce deformities of the pharynx, of the hard palate, of the teeth, of the turbinals and of the chest.

The naso-pharyngeal space is none too large at best. The child needs all of it. It serves as a passage for air to and from the lungs, for free ventilation of the middle ear, and in the production of the voice. What results follow the filling of this space partially or completely with adenoid tissue? First and foremost, nasal breathing is obstructed. Not enough air can be obtained by the natural route, the nose, and the child is compelled to make use of the unnatural route, the mouth. Children with adenoids are hence mouth-breathers. The decreased use of the nose produces a lack of its development. Like other organs of the body not fulfilling their normal function, it fails to grow properly and even atrophies. The nose becomes broadened and flattened at the base and obstructed within by reason of the swelling of its turbinal bodies.

The adenoid tissue is a collecting place for the retained secretions from the nose and pharynx that should pass away freely and unnoticed. As a result, these children nearly always show a persistent discharge from the nose, and take cold on the slightest provocation. The adenoid mass obstructs not only the nasal passages but also the eustachian tubes. This means interference with hearing, and allows at times the catarrhal discharge to flow into the ear where it may be the beginning of serious trouble. Children with their eustachian tubes thus closed off from the throat have constantly that uncomfortable stuffy feeling in the head and ears that we experience and find so disagreeable when we have a cold in the head. Their voices have that heady, nasal quality that ours have at such times. These children often snore vigorously when asleep.

The nose is the natural organ of respiration, and when the child is asleep and unconscious, nature insists upon this route being used. To do this the muscles that expand the lungs must do an excessive amount of labor to draw the air past obstructions. Hence we find in many of these children a characteristic deformity of the chest caused by this excessive straining of the muscles of respiration, deepened sulci and pigeon breast. Even with this effort the amount of air obtained is not enough for growing and developing children and, their blood being insufficiently provided with oxygen, their bodies are improperly nourished.

The general appearance of these cases is so characteristic that every physician recognizes them immediately. There is the drawn, pinched look in the face; the undeveloped nose, often broad at the bridge; the vacant, staring lack of expression in the eyes; the persistent catarrhal discharge from the nose, increasing with the slightest cold; the mouth breathing; the history of snoring at night; the shortened upper lip, hanging away from the teeth; lips dry from the constant passage of air over them; tongue dry and coated also by reason of the mouth breathing; and often troubles of digestion, from the evaporation of the saliva. By reason of the lack of development of the nose there also arises a deformity of the hard-palate, which tends to grow upward into a high pointed arch. The arch growing high, the width of the jaw is narrowed and the teeth, robbed of their normal amount of space, are crowded and irregular, resulting in mal-occlusion of the upper and lower jaws, misshapen faces and all the ills incident to faulty dentation and poor mastication.

There is no greater apparent miracle of modern medicine than the change wrought by the removal of their adenoids in these children. From the dull, heavy-eyed, uninteresting, unintelligent, apathetic look characteristic of their condition, they become interesting youngsters, fully capable mentally.

Dismissing in two words the question of the influence of the tonsil on the child's health there are, in my opinion, two classes of tonsil that should be removed from the throat of the child. First, *the enlarged tonsil that is occupying more space in the throat that it is entitled to,* interfering with proper breathing and with proper speaking. Second, *the diseased tonsil,* that may or may not be enlarged, but that by its presence is a source of *possible systemic infection.*

A private communication from Dr. J. J. Cronin, chief of the Department of Health, of New York City, states that the proportion of tonsils and adenoids found now in the school children of the city of New York is about 80 per cent. in children up to ten years of age. The statistics of the school efficiency of these children before and after operation show most emphatically the benefits to be derived from operation.

Finally, the very effective work being done at present by our local school inspectors and school nurses is centering the attention of teachers and parents alike on the subject of the relation the child's physical condition bears to his mental efficiency. It is a campaign of education and a worthy one that is sure to bear great fruit. Ambitious parents do not want dull children and grasp eagerly at any offer of relief. Unfortunately all parents are neither ambitious nor reasonable and unfortunately, too, scientific medicine is the growth of hardly half a century, while superstition and fetichism are a thousand generations old.

When we consider that it is only within the last few decades that we have become familiar with the evils incident to uncorrected refractive errors in childhood and to those resulting from hypertrophy of adenoid tissue, and that it is only within the past few years that any popular interest in the subject has been aroused, we may feel glad at what has been accomplished and encouraged at the prospect of the years to come.

814 Corbett Bldg.

MIDDLE EAR DISEASE IN CHILDREN.*

By N. P. Wood, M. D.

SEATTLE, WASH.

In presenting a paper on middle ear disease in children it is not for the purpose of advancing new ideas of its etiology, pathology or treatment, but to call to your attention once more its frequency and the importance of looking after the ears of the children, that we may avoid not only the too frequent acute troubles, but also have less use for the ear trumpet and acoustican in adult life.

Statistics in the largest hospitals for the treatment of ear, nose and throat show that considerably over 50 per cent. of the acute ear cases occur in children under ten years of age, and the great probability is that a large number of chronic cases in adults that come to the doctor for treatment originate from troubles which started in their younger days, the results of which are not noticed until the conditions become so far advanced that treatment is often unsuccessful.

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*Read before the Twenty-first Annual Meeting of Washington State Medical Association, Bellingham, Wash., July 26-28, 1910.

Etiology. There are several reasons why we may expect more ear troubles in the young than in the adult; first, because of the prevalence of the exanthemata; second, because of a natural lack of resistance and third, because of the anatomic differences.

It is, of course, a well-known fact that suppurating ears are amongst the common sequellae of measles, scarlet fever, diphtheria, whooping-cough and influenza, particularly so in measles and scarlet fever, and the popular fallacy amongst the laity that a running ear will soon right itself, with no serious consequences to the child, causes the neglect of many such ears. They may result in serious mastoid complications, with possible brain or sinus trouble at the time, or leave the ear in such a condition that it will in the future cause trouble in this way or in deafness that is very difficult to contend with.

Again, the naturally weaker constitution of children and their lessened ability to withstand infection makes them very susceptible to middle ear diseases. The mucous membrane of the naso-pharynx is at all times more or less covered with bacteria which are carried in by the inhaled air and dust, and deposited on the mucous membrane of the nose and pharynx.

The size, position and inclination of the eustachian tube in childhood are such as to allow of an easy entry to the middle ear of any bacteria in the naso-pharynx. This tube is more nearly horizontal and considerably shorter and more patulous in children than in adults, and all of these conditions, of course, make for an easier infection of the middle ear. Especially is this so where the lymphoid ring is hypertrophied and the vault is filled with a mass of adenoid tissue.

This mass of adenoids is well likened in shape to one-half of an English walnut and, bathed with a large amount of muco-purulent secretion, it takes but a short time for ulcers to appear in its interstices which, from their location, are impossible to be successfully treated. This makes a source of constant irritation and an additional cause for continued purulent secretion. The secretion falling over the mouth of the eustachian tube keeps it inflated and the ear in constant danger of all sorts of infection.

Pathology. The pathology of middle ear disease in children is similar to that in adults. We distinguish two divisions, catarrhal and purulent, the former being simply a catarrhal inflammation of the lining mucous membrane of the middle ear with some exudation as is found elsewhere in inflammatory conditions of the mucous membranes of the body. The purulent type is due to infection from bacteria, usually conveyed through the eustachian tube. The pneumococcus, streptococcus, staphylococcus and influenza baccilli are the most frequent forms of bacteria found and of these the pneumococcus is said to be the most common. The accompanying inflammation of the eustachian tube usually causes it to become closed and thus the drainage way for the secretion in the middle ear is stopped. Accumulation of secretion causes a bulging of the drum membrane with inflammation and severe pain. The process may extend to the antrum and mastoid cells and result in necrosis of bone with well known sequelae.

Symptoms. Most diseases of childhood may be divided into three classes; one dealing with the gastro-intestinal tract, another with the respiratory tract and a third with the ears, and no diagnosis should be made without a thorough examination of the ear, unless the symptoms point absolutely to one of the other classes.

An examination of the ears in infants, while often rather difficult, can usually be satisfactorily made and enough be seen to at least include the ear in one's diagnosis. Contrary to the manner of examining the drum in adults, the auricle should be pulled downward and backwards when, with the help of a small speculum, one can usually get a view of the drum membrane. This, together with a digital examination of the naso-pharynx, will give sufficient data to determine the condition of the ear in cases where there is no discharge or edema of the ear or mastoid.

When children are old enough to give a history of trouble, it is easy to get symptoms pointing to involvement of the ear, but in infants it is often rather a difficult matter and is apt to be overlooked in a good many cases. Where you find a condition of restlessness, sleeplessness, peevishness, where the child refuses to eat or drink, showing derangement of the bowels, malnutrition and some fever, without definite symptoms pointing to either of the other classes, the cause will usually be found in an infection of the ear.

Treatment. We have little or nothing new to offer in way of treatment or care of ears of children. The first thing to be mentioned would be prophylaxis in all diseases, especially in the exanthemata. The ear should be carefully watched, more especially during the period immediately following the severest part of the sickness, when most complications are apt to appear, because of the run-down condition of the patient. During this time it is well to keep the naso-pharynx in as clean a condition as possible, washing or mopping out all mucus and keeping the air passages free. If the child has a mass of adenoid tissue, it should be removed as soon as his condition will allow of its being done. This in itself will eliminate a large source of danger and may be done with safety as soon as the child begins to recuperate.

The drum membrane should be watched each day and, if found to be red and bulging, an early paracentesis should be performed under strict antiseptic conditions. It is much better to have a clean-cut incision in the drum membrane than to allow the ear to go until nature perforates and a ragged opening is made, usually of insufficient size to allow of ample drainage. Then, too, the membrane may not perforate if let alone and a mastoid involvement may result which could have been prevented.

In case of suppurating ears the treatment will depend largely on the amount and character of the secretion. As long as the secretion is serous and of moderate amount, a gauze wick drain along the bottom of the canal may be sufficient. If the character of the secretion changes to a purulent one and is considerable in amount, the ear should be irrigated with a weak bicholorid solution, of one to five thousand, often enough to keep the canal practically free from the secreted material. When the secretion is reduced to a very small amount, discontinue the irrigation and use a solution of equal parts of alcohol and bicholorid, one to one thousand, with twenty grains to the ounce of boracic acid. A few drops of this solution should be dropped into the ear three times a day, held for five minutes, removed, the ear dried and a little aristol or other mild antiseptic powders insufflated.

This treatment will probably be all that is necessary but, should mastoid involvement appear an early operation and the exentration of as much bone as is necessary should be performed. The danger of delay in this matter is greater than in adults because there is greater likelihood of brain, nerve or sinus involvement, due to the fact that in the younger subject the plate of bone separating the middle cranial cavity from the antrum is very thin, the petrosquamous suture often not entirely closed and deficiencies often appear in the covering of such important structures as the carotid artery, facial nerve and lateral sinus.

As an example of how otitis media may be neglected until irreparable damage has been done, I may be pardoned in citing a rather interesting case seen some time since.

Baby B., aged eleven months, when first seen had a thick purulent discharge from both ears, a considerably larger amount from the right. The right auricle was red, inflamed and swollen, the skin over the mastoid drawn and edematous, the ear protruding at almost a right angle to the head. There was total right side facial paralysis, the entire drum membrane was wanting and the ossicles had disappeared. There was a history of scarlet fever about four months previous, and the ear commenced discharging at this time, though the facial paralysis was of comparatively recent date. The child was prepared for a mastoid operation, the usual incision made and the periosteum retracted, when a sequestrum of bone was lifted out by a pair of thumb forceps and it was found that a practical, radical operation had been performed by nature. The bone of the sequestrum was that which would be removed in such an operation, but the whole of the posterior wall of the meatus was necrosed and that part of the facial nerve traversing this wall was decayed and in shreds. The cavity we found to be filled with granulation tissue and cholesteatoma. This was fully removed and the cavity allowed to heal by granulation. The discharge from the ear ceased but, of course, the facial paralysis was permanent. The amount of suffering that the child endured in such a severe process must have been enormous. And this is a type of one of those cases which should be immediately looked after and carefully treated.

Dr. T. P. Berens, of New York City, in *Laryngoscope* for January, 1910, reports a similar case with photographs of the bone detached broken in two pieces. The specimen I have seems to be the entire mastoid.

Cobb Building.

MEDICAL INSPECTION OF SCHOOLS.

By N. L. Thompson, M. D.,

EVERETT, WASH.

In these days of preventive medicine, when the health of our neighbors and our neighbors' children is rightfully considered a matter of our concern, when conservation is our national watchword, when we are looking ahead to a higher standard in things material and moral for our nation, it is well for us to consider what manner of posterity shall inherit these things from us. "The school is the nursery of the nation." From out of this nursery is to come the flowers and fruit, the men and women of the nation. To develop the all-around and perfect man is becoming more and more the aim of our educational system.

I do not expect to treat in detail the various aspects of medical inspection of schools in the short time allotted to me for this paper. Believing, however, from my knowledge of what has been done and written along this line in these meetings that I am treading upon new ground, I have thought it best to outline the whole subject, trusting that future meetings will permit of further elaboration of its different phases.

From small beginnings in medical inspection instituted to prevent the spread of communicable diseases, there is growing up a new line of medical work which bids fair to change many of our methods of education and enable us to give to each individual a better equipment for life's duties. In this work America does not lead as we might wish, but follows other countries. Though of recent growth, medical inspection of schools was born many years ago. As early as 1833 France had laws looking toward the care of her school children. Brussels, in Belgium, has the honor of first inaugurating a system of medical inspection along modern lines, in 1874. Sweden followed in 1878, Cairo, Egypt, in 1882, Paris in 1884, Hungary in 1887, Chile in 1888, and Boston in 1894. Boston seems to have established the first regular system of medical inspection in the United States, although two years previously a medical inspector of schools had been appointed in New York City to work under the sanitary superintendent. New York City was not, however, divided systematically for the work till 1897, being preceded by Chicago in 1895, and followed by Philadelphia in 1898.

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*Read before the Twenty-first Annual Meeting of the Washington State Medical Association, Bellingham Wash., July 26-28, 1910.

While cities all over the United States are adopting some plan, Massachusetts still leads with a state law, passed in 1906, providing for a system of medical inspection of schools in every town and city. In our own state I received replies from nine cities showing that medical inspection to a greater or less extent was utilized in Seattle, Spokane, Tacoma, Everett, North Yakima, Olympia, and Aberdeen. Negative replies were received from Walla Walla, and Wenatchee, and no reply from Vancouver and Bellingham. Possibly other cities are doing something. Like public offices, public schools are a public trust. When the parent delivers his child to their care he has a right to insist that the child under the supervision of the school authorities shall be safe from harm and will at least be handed back to him in as good condition as when he entered. We have long recognized this to a certain degree and for the state's protection have not hesitated, under our city and state health laws, to exclude from school the child who by reason of some communicable disease is a menace to the health of others. We are now coming to recognize that the individual child has a claim upon the state to the extent that his physical well-being shall keep pace with his intellectual.

To vary the words of Dr. William H. Allen, who says: "When the state for its own protection compels a child to go to school it pledges itself not to injure itself by injuring the child," we might say, that when the state for its own benefit compels a child to go to school it pledges itself to benefit itself by benefiting the child to the fullest possible extent. We expect our children to know more than we did. We expect thereby to make the state a better heritage for our grandchildren. Since education must comprehend the whole man and the whole man is built fundamentally on what he is physically, we expect our children to leave school better equipped physically than we did. This means that present physical defects must be corrected and it is up to the state to see that they are corrected.

With one out of four or five of our school children absent and the greater proportion of absentees due to sickness of the child or sickness in the home, it is easy to see how a careful watch over our school children by physician and nurse will reveal the condition of our community health. To learn the facts disclosed by a physical examination of the school children will be the first step toward a health crusade that will be far reaching.

"The advantage of starting this health crusade from the most popular American institution, the public school, is incalculable." To reap the greater result we must have medical examination, not simply medical inspection. The latter is the search for communicable disease. The former is the search for defects which furnish soil for contagion. The one is primarily a protective measure and looks mainly to the present safeguarding of the community. The other aims at securing physical soundness and strength and looks far into the future.

The state provides for the education of all citizens as a measure of self-protection. She should also take cognizance of their physical welfare for the same reason. If their health and education are to go hand in hand, as we believe they should, educational agencies must employ expert medical inspectors who shall see that the health of the school child is conserved.

"It ought not to be an incidental activity of some department but must eventually outrank all others in power as it does in importance. It should aim to accomplish the following: (1) Prevention of infectious and contagious diseases. (2) Scientific supervision of sanitary condition of premises, school buildings, furniture, etc. (3) Teaching of hygiene to teachers and children and through them to the community. (4) Physical education, including supervision of manual training, gymnastic exercises, organized games, etc. (5) Physiology and psychology of ordinary educational methods, including fatigue, neurasthenia, hysteria, questions of sex, etc. (6) Special educational methods for abnormal children—the mentally and physically defective, the dull and backward, the blind, the deaf, etc."

Thus it will be seen that the medical inspector is to become a very potent factor in future educational systems and a wide and attractive field is opening up to the right men. The work is but in its infancy. It is difficult to say where it will end. The medical inspector must, therefore, be broad minded, with sound and extensive medical knowledge, interested in child life, sympathetic, tactful, an investigator; in short, a medical man, a psychologist and a pedagogue.

Given such a man and the methods which he will employ, while based somewhat on what has been done by others, will be his own and will be adapted to the needs of his particular schools and community. To give even in outline the methods that have been employed in various cities would go beyond the limits of this paper but the most simple method that can be employed is to have the teachers refer to the inspector those pupils whom he or she suspects to be physically defective.

Every school district can do this and the following figures from a recent inspection of Everett schools will show its possibilities. Out of a total enrollment of approximately 4000 pupils, 650 were referred to the inspectors by the teachers. These were found defective as follows:

(1) Nutrition poor 48, (2) Enlarged cervical glands 128, (3) Chorea 6, (4) Cardiac disease 15, (5) Pulmonary disease 10, (6) Skin disease 17, (7) Deformities 7, (8) Defective vision 186, (9) Defective hearing 64, (10) Hypertrophied tonsils 160, (11) Adenoids 161, (12) Bad teeth 215.

A few of the problems presented by these statistics may be gathered when we think of a child trying to keep up with our courses of study who is reported as having poor nutrition, enlarged cervical glands, defective vision, defective hearing, hypertrophied tonsils and adenoids; or cardiac disease, skin disease, spinal deformity, defective hearing, hypertrophied tonsils, bad teeth and poor mentality; or poor nutrition, pulmonary disease, defective hearing, hypertrophied tonsils, adenoids and bad teeth.

On the other hand, think of your child being handicapped by having the class pace set by one of these.

How to improve these conditions is the next question. Parents of these children are notified by mail of this defect and asked to present the child with the notification card to the family physician for his advice. In a previous examination these children were again inspected and those not showing evidences of having been treated were again returned to the family physician. At the present time these cards will be placed in the hands of a school nurse who will do the following-up in a much more effective manner. These cards are signed by the board of education for, as a member of that board, I believe this board must be the controlling authority, if the above aims are to be realized.

Such an examination as I have outlined is more of an educational question than one of public health. The children are directly under the control of the school authorities and, until the time comes when our departments of health do a similar work for all people, they cannot best do the work for school children. There should be the closest relationship between the school inspector and the local board of health and all cases of infectious and contagious disease should be referred to the board of health. Of this there can be no question.

The State of Washington has at present no general law covering this question. The work that is being done is done by the local boards of health, boards of education, medical societies or all working together. If, as has been stated, it be as important for the state to look after the physical welfare of its children as it is to provide for their mental training, justification can probably be found in existing laws for the employment of every proper means toward that end. Such authority on the part of the state is shown in our vaccination law.

The great difficulty is to enforce treatment. In the case of disease for which the child is excluded from school, we can possibly resort to our truancy laws and compel treatment but that again is but a beginning. Our present reliance, then, must be upon education of the parent to the direct benefits to his child and of the taxpayer to the indirect benefits, as well as direct, which he will derive. Having done this the necessary laws will follow. Our most effective argument is going to be to show that it pays in dollars and cents.

To summarize:

(1) The physical welfare of our school children is as much a matter of state concern as their mental wellbeing.

(2) Systematic physical examination will not only keep our school children up to the highest standare of physical condition but will prove one of the most efficient agents in improving community health conditions.

(3) Such examinations to attain their highest efficiency must be made and followed up by medical men and nurses under control of the school authorities.

(4) Simple methods may be adopted and are needed in rural as well as city schools.

(5) As far as possible effort should be made to educate the parents to care for these defects themselves but if not, the state in the future may assume entire control.

(6) The benefits to be derived accrue not only to the individual but to the state.

(7) As a dollar and cents proposition it will pay.

In conclusion, I hope that future meetings may bring forth papers dealing with specific phases of this question, collecting and correlating statistics and recording the work done along this line in our state.

I hope that more and more the medical profession will be represented in our boards of education and that wise laws permitting the elaboration of this feature of education may be enacted by our cities and states.

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ANTI-MENINGITIS SERUM.

The Rockefeller Institute for Medical Research, in accordance with an announcement made last summer, now gives notice that it has discontinued the general distribution of anti-meningitis serum which it has undertaken without charge ever since the discovery of this remedy for cerebro-spinal meningitis. The effectiveness of this remedy in that form of meningitis which is caused by the diploccocus intracellularis (Weichselbaum) having been generally accepted by medical authorities throughout the world, it has seemed appropriate that The Rockefeller Institute should devote to other lines of investigation the funds hitherto needed for the gratuitous distribution of the serum, handing over to the public health authorities of municipalities and states, and to commercial establishments, the routine preparation of the serum for general use. The anti-meningitis serum will thus take its place with vaccine and diphtheria anti-toxin as an approved agency for the protection of public health.

The Board of Health of the City of New York is the first of American boards of health to undertake the regular production of anti-meningitis serum. It will provide for the free distribution of serum to all hospitals in the city, and, at the outset, to all physicians who apply for it. Later the gratuitous distribution other than to hospitals will be limited to those cases in which the physician certifies to the hardship that would be cause by a money charge. All others will be required to pay for the serum at a price covering its estimated cost. Pending the production of the serum in other localities, the New York Board of Health will, as a matter of humanity, supply such urgent requests as may come to it from outside the state, but this provision will probably be necessary for only a short time Within the City of New York the Board of Health will designate a few stations where serum will be kept on hand.

The serum is administered by being injected into the spinal canal by means of lumbar puncture, an operation which is also required to secure the fluid for bacteriological diagnosis; and several separate injections of the serum are required in treating a given case. The effective employment of the serum is likely, therefore, to be restricted on account of the experience and skill required in its administration and the high cost of the commercial product, unless the preparation, distribution, and, when necessary, administration, are undertaken by state and municipal authorities.

February 13, 1911. JEROME D. GREENE,
General Manager.

Sixty-sixth Street and Avenue A,
New York City.

FOLLIES, LEGAL AND OTHERWISE, CONCERNING OUR MEDICAL PRACTITIONERS.*

By J. C. Robison, M. D.

CEDAR CITY, UTAH.

Rudyard Kipling is a very quaint and interesting writer; most of us like him splendidly. A few years ago he traveled from India to England by way of America, and his criticisms of us were as harsh as some in Dickens' American Notes.

He said that we deluded ourselves into the belief that we talk English, *the English,* and that he was pitied for having an "English accent"; but, after all our talk was only the language of thieves; where the accent should be forward we throw it back, and vice versa, and words so simple as to be past mistaking we pronounce somewhere in the dome of our heads. Some of this criticism may be justifiable. Dr. Holmes said that the Yankee schoolmarms, the cider, and the salt codfish of the Eastern states are responsible for what he calls a nasal accent.

But Kipling goes farther than this. He says the American has no language, but it is dialect, slang, provincialism, accent, and so forth. He claims that we do not drink at meals as a sensible man should, that we have no meals, but stuff for ten minutes thrice a day. In all of this there is some fabric to build upon, but how very misleading and in a way incorrect. Now I have a better opinion of Americans, and a much better opinion of her M. D's, but I do think oftentimes we are apt to be a trifle hyperopic and not notice the smaller things in our professional work; it is of these that I desire to speak.

I want these lines to cause us to delve deeper into our text-books, and peruse some of the pages that perchance have been forgotten for months or even years. Our medical journals are splendid. I do not know what we could do without them, but he who absorbs them to the exclusion of the text-books is not the well rounded man that he should be. In spite of the fact that most of us are readers and students, at times a point escapes us and we go through our professional life minus that idea or that point, often with a serious handicap.

Have you noticed how very careful you are in conducting a maternity case, as far as the aseptic precautions are concerned, and how chagrined you would be to have it said that puerperal sepsis resulted, due to your carelessness? But that isn't half the work devolving upon you with that confinement. How many of you make a routine practice of examining the condition of the foreskin of the male child before you are through with the case, dilating the preputial orifice, if necessary, and freeing any adhesions that may exist, or what percentage of us use a drop of our favorite silver preparation in the eye to prevent ophthalmia neonatorum? The dire results from the neglect of this last mentioned item is playing havoc in the world today; institutions for the blind are becoming overcrowded, and a goodly percentage of this trouble could have been spared had this one little point been carried out.

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*Read before the Sixteenth Annual Meeting of the Utah State Medical Association, Salt Lake City, Utah, Oct. 3-4, 1910.

We notice people not infrequently with angioma of the face, a patch of dilated veins and capillaries which produce such a horrible deformity that the lady will wear a heavy veil to conceal the condition, or perchance dress the hair low on that side, in fact resort to anything to cover it up. Of course a man is forced to let them stare. This is almost always an occurrence of early infancy and it is the duty of the attending physician to see that this trouble is properly treated and thus save a lifelong chagrin on the part of the unfortunate one because, if left alone until later years and treated, the remaining scar is almost as bad as the discoloration.

When we realize that this lesion increases rapidly, how important it is to remember that early treatment is desirable in order to avoid unsightly deformity. The vessels dilated are usually those of the superficial layers of skin, now and again the deeper vessels being involved. These capillary angiomata are successfully treated by puncture with a fine needle attached to the negative end of an electric battery, which should contain from 8 to 10, up to 24 small cells, according to their recentness.

The positive pole should be a moist sponge held closely against the face, while the needle on the negative pole is thrust into the skin at right angles to its surface, from one-fourth to one-third of an inch. It is important that the needle inserted should be the negative pole, because if the positive pole be used bubbles of oxygen will form around it and produce oxide of iron which, if it remains in the tissues, will produce discoloration, often leaving a permanent stain. The current should be sufficiently strong to produce a white zone about the needle one-eighth of an inch in diameter in 10 to 20 seconds. If too strong, the escharotic action is too great and a permanent scar results. If too weak, the cauterization is incomplete and the puncture is apt to bleed badly when the needle is withdrawn. A half dozen punctures could be made at one sitting and the treatment repeated twice weekly.

Some prefer the injection into the nevus of a few drops of water almost at the boiling point; the blood is coagulated and the treatment will have a permanent effect as will be manifested in a few days. If any red spots remain additional injections should be made. Again, how many are there who know of mothers who are continually dosing the baby with paregoric, and later laudanum. Then, you find some who are afraid of these but buy bottle after bottle of Mrs. Winslow's soothing syrup, or some other damnable panacea that may fasten the drug habit upon the growing child. It is not enough that we have the labels printed with the ingredients of the contained medicine, but we must work to have our state laws regulate the sale of soothing syrups, paregoric, laudanum, etc., so that nothing along these lines can be obtained without the doctor's prescription because, if a panacea contain an opiate, it is as dangerous as the opiate itself.

You no doubt have read of the New York scrub woman who attended an association ball of some kind who, when asked by her employer how she could attend such functions when she had two children at home, replied, "Sure they're all right, just wan teaspoonful of Winslow's and they lay like the dead till mornin'." What do you think became of those children?

I had the body of a young man brought into my office some months ago. He had been surrounded by wealth and affluence, but had come to an untimely end. When I examined his person I found a gaping gun wound passing from the right eye to the parieto-occipital region on the left. His arms had numberless abscesses pointing to the deadly fangs of the hypo and, on inquiry, I found that his doctor had permitted the use of opiates until he became a fiend of the rankest dye.

I recognized him as soon as I saw his features. Two and a half months before I was in a horrible railroad wreck, where people were killed, maimed and injured, and he was also there. On looking about for morphin to relieve the pain of some more seriously injured, I found him just loaded with it, not only in his pocket but beneath the cuticle. Two or three days later he stepped into my office for some tablets. What could I do? He was beside himself, had been without an opiate for hours. I furnished it and he was soon happy.

The uncle told me the whole story after his death. Plenty of money; good, kind friends and doting parents; a spell of sickness diagnosed as stomach trouble; pain, intense pain, and for relief morphin, but *some* called for *more* until he was a fiend. Taking it by the mouth ceased to have the desired effect; then the hypo came into play and, judging from the abscesses on his arms, the play was almost completed before the curtain fell.

A fifty thousand dollar deal in sheep was on. The parties were not abiding by their contract and he was so wrought up over the affair that he stepped into the sheep wagon and sent a bullet through his brain, leaving a loving wife and child, a doting father and mother, and means sufficient to live a life of ease and luxury. What caused it all? Why, dope and that is what you and I should exert our energies to regulate. Jot it down now and by a united effort let us see what we can do with our next legislature.

Did you ever stop to consider the importance of giving a little advice now and again among your patients on the care of the teeth? How do you account for our extreme carelessness along this line? We know that a large proportion of dental operations are preventable, and also that a large proportion of the world's population are ignorant of how to prevent them. We cannot conscientiously say that all this work devolves on the dentist because, if the teeth are bad, there is sure to be some trouble with alimentation, and what is more pitiable than cases we all know of where the stomach has been doing work that the teeth should have performed for a score or more years.

The teeth are used to masticate food, to assist in articulation of words and to give expression and beauty to the countenance. If they are not properly cleansed we know that bacteria begin work at once, forming lactic acid, which is decidedly destructive to the enamel. The bacteria thrive best in starch and saccharin food, and we know that the human mouth is a regular hotbed of bacteria when the proper media are there, i. e., food particles minus tooth brushing. It is possible for us to control in some measure the rapidity with which this life develops. This cannot be done by antiseptics and mouthwashes alone, as experiments have shown.

A German doctor carefully estimated the number of bacteria in the mouth. Then a bichlorid solution of 1 in 500 was used as a mouth wash, this being a very strong antiseptic. Nearly all the bacteria seemed to be killed. Yet in fifteen minutes 9 per cent. of these bacteria had developed and at the end of four and a half hours 75 per cent. of the original number were found in the mouth.

If the teeth were exercised sufficiently at meals and time taken to masticate the food thoroughly, and the teeth properly cleansed after each meal, then caries would cause very little trouble, and we could go through life with sound and sane denture. Kipling was in a measure correct when he accused us of stuffing for ten minutes thrice daily.

A desire for a better feeling in the mouth induces almost every decently brought up person to brush the teeth the first thing in the morning. Two minutes can easily be taken after the breakfast for another brushing, and the business of the day can be started with a clean mouth and wholesome breath. A minute or two can always be found after the meals to brush the teeth, and at bedtime the most thorough cleansing of the day should take place, because we know that the removal of food particles is of greater value than the use of mouth washes in securing immunity from decay. If food particles are left in the mouth at night there is a long period of rest, acid fermentation takes place and carious action started. The more carefully the food has been removed and the more highly the teeth have been polished at bedtime, the greater the security against decay.

Do you instruct your patients along these lines? It is a simple matter but I am dealing with simplicities and still, all weighed together, the balance is pretty heavy.

And then there are the eyes to consider, our advice along these lines being very valuable. When there is strain or impairment of vision do you advise the patient to go to the oculist or do you neglect this part and let him drop into any optician's shop that he may come across?

Let me explain why I mention this: A doctor from Idaho, recently Lieutenant Governor of that state, and I visited one of these optical schools in Chicago while we were doing postgraduate work a year ago. The woeful condition that we encountered there filled us with disgust. Men who had probably never learned a clear half-dozen ideas about the anatomy of the human eye were being turned out to fit glasses on the poor ignorant public, after they had spent from three weeks to a month in this line of work. And when the head of the school found we were M. D.'s he wanted to put us through in a week, provided we paid the necessary tuition, but we didn't put.

The heads of this concern are the McFatrich's of Chicago, who sell a little borax with some simple astringent in an ounce of water for one dollar and call it murine. The diplomas they issue to those who take the eye course are most ornate and are intended to fill the average person with respect for those who have earned such a wonderful document. And these same graduates go out from that school and travel up and down this and other states, causing more harm than you are aware of. It is our duty to protect our people from such as these.

Shame upon Utah, who would institute a so-called board of optometry, in order to permit these spectacle venders to travel about and ply their trade among an unsuspecting public. No M. D. should have anything to do with such a board, as any high school student in physics could pass the examination creditably. Can not we do something with this at the next session of our legislature?

Is it possible that we could be negligent along this line when we take so much pride in doing our special line of work so well? Are these the men who are going into our schools to see if your child or mine need attention for their overworked eyes? I can name you schools where they are doing it.

And what schemes they resort to! They will tell the people that the drops the oculists use in the eyes are injurious and ruinous to the sight, and they know they are falsifying. The people do not have wisdom enough to know how very important it is that those same drops be used to overcome the accommodation of the eye, in order to get the proper test and the right fit of glasses. And in that one respect, if for no other reason, the oculist should do the work because he knows just what to do and how to do in each case, while the traveling optician is a mere machine, nothing more. And thus we could go on considering many such minor points, but enough.

This paper has been a medley, but anyhow we can summarize: The foreskin of the male child should be carefully looked after, and the eyes of all new-born should not be neglected.

Any nevus should be examined and any treatment necessary given.

We must arrange to have the sale of opiates better regulated.

Instruction along the care of the teeth should be given.

We must protect our families and the general public from the traveling spectacle venders.

And above all we should use our influence with our legislature to have laws enacted to meet these conditions.

PEMPHIGUS.*

By Louis Buck, M. D.,
PORTLAND, ORE.

Pemphigus is a rare and as yet obscure skin affection, with many varieties described chiefly as to duration, age of the patient, clinical characters and behavior of the eruption. The many varieties can be described under the heads of acute, chronic, follaceous, vegetans, gangrenous, hemorrhagica and neonatorum types. These are self-explanatory. This paper will not include the many varieties here enumerated.

Acute pemphigus includes all cases in which the course is more or less limited, the duration of which may last from several weeks to several months and terminate either in recovery or death. It is characterized by the formation of scanty or numerous irregularly scattered blebs and may be accompanied by mild or severe constitutional disturbance.

The eruption usually comes out suddenly with a feeling of malaise, slight or severe febrile action, chilliness and other evidences of a systemic disturbance. The lesions vary in size, from a pea to that of a pigeon's egg, distributed irregularly over the surface and may come out at one time, but usually in distinct crops. The contents of the blebs are usually clear at first but in a day or so may become milky, opaque and sometimes, in fatal cases, hemorrhagic or gangrenous. The lesions may attack any part of the body.

The mildest cases are not accompanied by much febrile action or constitutional disturbance. The subjective symptoms consist of tenderness, soreness, burning and itching. In the grave types the symptoms increase in severity.

The throat, mouth and other mucous surfaces show serious involvement. The blebs become puriform in character and the underlying surface gangrenous, and death follows. Quite often in the acute varieties of this affection the lesions become less numerous, gradually become less active and go into the chronic form.

Another variety often met with now and then is pemphigus neonatorum, which is usually of the epidemic form. This was shown to be the case at the Good Samaritan Hospital a few years ago, when all the new born babies present at that time contracted this ailment. It usually comes on a few days after birth and runs a rapid but mild course.

Chronic pemphigus is the most frequent form met with and to which the name pemphigus vulgarus is also applicable. It is considered rare in this country. The chief distinction from the other varieties is that the blebs continue to appear incessantly, the skin being as a rule never free, but occasionally there may be shorter or longer intervals of complete freedom. There may be one or more blebs at a time, or there are distinct crop-like exacerbations. This continues indefinitely. After the appearance of the blebs they may coalesce and, if not opened, become either flaccid and flat or purulent and break, leaving a raw, oozing surface, or a crust with a rapidly forming exudation beneath.

Fissuring may occur about the joints, there is a foul odor about the patient when these latter conditions present themselves, with increasing gravity of the constitutional symptoms, the patient finally succumbs from exhaustion, pyemia or from some intercurring disease.

Fortunately pemphigus is a very rare disease. It is met with in both sexes, more frequently in infants and children than adults. The causes are obscure, not being due to any specific trouble, nor is it hereditary. It is probable that the several so-called varieties are due to different causes.

Acute pemphigus may originate from an infected wound, in infants a disease of the navel and from the puerperal processes of the mother. Other factors are chills, peripheral nerve injuries and diseases of the central nervous system.

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*Read before Portland City and County Medical Society, Portland, Ore., Oct. 19, 1910.

That the derangement, functional or organic, of the nervous system is of etiologic importance is borne out by Kaposi, Crocker, Charcot, Dühring and others. Whether the action is a direct one or merely contributory to a parasitic invasion or infection, is an unsolved question. It has been claimed that defective kidney elimination is a cause.

Cases unattended by temperature elevation or other constitutional symptoms get well, although a possibility of changing to a severe type is to be kept in mind. The prospect in children is much better than in adults. This disease has been observed in young girls between the periods of puberty and full sexual maturity, with menstrual difficulties.

The presence of a bleb or blebs does not, as may often be considered by physicians, constitute pemphigus. Blebs occur in dermatitis herpetiformis, erythema bulbosom, pompholyx and many other skin affections. The most usual sites of blebs, according to authorities, are on the lower trunk and thighs. In extreme cases the nails and hair are brittle and sometimes shed. The eyes are sore looking, the conjuctivae may become involved and the mucous membranes share in the disease.

Two cases of pemphigus have come under my care. The contrast between the two shows how widely different this disease may affect an individual.

Case 1. Mr. J., age 26, colored, presented himself with a bulbous eruption on his face, scalp and hands. Had no temperature or other constitutional symptoms except that the eruption was present. I made a diagnosis of pemphigus and sent him to Dr. Maxwell, then in this city, to verify my diagnosis and for him to present the patient to the students for clinical purposes at the medical college, in which he had a chair. Diagnosis was confirmed.

The treatment in this case consisted of Fowler's solution internally and a saturated solution of boric acid externally. In a week to ten days blebs all dried up, and patient recovered without losing a day's work.

Case 2. Mrs. H., age 49, Jewish nationality, came to the office March 2, 1906, with a sore mouth and tongue, believing she had stomatitis. I prescribed for same. She came back to office the following day to have sore spots treated. No results were obtained. I was called to her residence the following day to see her, as she was unable to walk on account of soreness in the region of the folds of the groin. Examination revealed some blebs in development and some broken, also an eroded surface. I was still in doubt as to diagnosis until next day, when blebs on the thighs and lower trunk were observed. I suspected pemphigus, and called Dr. King to verify my diagnosis.

Treatment by external applications of zinc oxide and calamine lotion, and internally arsenic, proved of no avail. The eruption kept on spreading to all parts of the body, the eyelids, ears, nose, mouth, hands and vulva region becoming involved. In fact, there was hardly an area on her body which was not attacked with blebs. There were puriform, hemorrhagic blebs, also crusts and areas of raw surfaces. Dr. Bell saw her in consultation, also later Dr. A. J. Smith. I sent her to the hospital, where Drs. Giesy and Whiteside saw her. She was unable to help herself or move, owing to the pain she experienced from the raw surfaces. It required two nurses to make external application and to turn her. The external applications consisted of all varieties of ointments and lotions, and stimulating tonics and diuretics were given, when the patient began to improve and left the hospital five and a half weeks from time of onset of the disease.

At that time a few blebs only were present, which disappeared in about one week after she arrived home, when suddenly a crop of blebs appeared again, first on the toes, then spreading again to all parts of the body, face, eyes, ears and nose. There were fissures about the joints and a foul odor about the patient. Her sufferings were terrible to behold, she constantly begging to die. She lingered until June 17, when suppression of urine occurred and she went into a comatose condition and died. The length of time in which this patient suffered was about three and a half months.

The variety which this patient had is known as pemphigus follaceous. I doubt if any ever get well If I ever had a similar case to deal with I would recommend a continuous alkaline or bran bath. This patient was in the midst of the menopause and I have often questioned whether this condition was an etiologic factor in her case.

STERILITY.

By D. F. Donnelly, M. D.,

PORTLAND, ORE.

In the discussion we shall consider only the forms of sterility due to disease or malformations of the organs of reproduction of the female. Associated with these conditions, especially with regard to treatment, must be considered dysmenorrhea arising from identical or similar causes.

Kisch, in his recent work on The Sexual Life of Woman, considers the etiologic factors of sterility under the following headings:

Absolute, due to impossibility of fertilization from defective formation of the spermatozöon or ovum.

Relative, due to mechanical interference with the conjugation of spermatozoön and ovum.

(a) Perioöphoritis and perimetritis with attendant adhesions causing displacements.

(b) Pyosalpinx causing tubal obstruction.

Then there is the sterility resulting from new growths and another form results at times from cicatricial stenosis following amputation of the vaginal portion of the cervix—certainly an unfortunate sequence to an operation for the cure of sterility.

Runge and Kelly and Noble also discuss the frequent causes of sterility dependent upon a shallow and gaping vagina, which does not allow the retention of fluid.

Sterility follows often, as we all know, endometritis and the various forms of local infection. R. A. Gibbons, in the *London Lancet,* holds that conception is often impossible because of vaginal discharges other than gonorrheal. Anteflexion and stenosis of the cervix frequently give rise to sterility, and it is with the latter that we will deal chiefly.

The existence of dysmenorrhea from similar conditions may be summed up under the following headings:

(1) General diseases of chronic nature not influenced appreciably by local treatment.

(2) Local. Nondevelopment or deformity of sexual organs. Stenosis of cervix, narrowing of external os or the canal, or stenosis of the internal os (the most common point of constriction).

Treatment of Sterility Resulting from Cervical Stenosis.

This is best accomplished, I believe, by the use of the Schatz metranoikter, or in many cases by the Hirst modification of that instrument. The operation is simple and the results more than gratifying.

Technic.—Place an Auvard speculum in position. Seize the anterior lip of the cervix and pull down; dilate gently with light two-branched dilators; then with the heavy dilators and open the canal 1¼ inches with a Cleveland four-branched dilator; curette the sides with a Sims curette and the fundus with a Martin curette; flush the uterus with a Bozeman two-way catheter; insert the metranoikter by means of the handle and pack the vagina with gauze.

One would naturally think that great pain would be occasioned by retention of the metranoikter for twenty-four hours, but I have seldom seen a case which could not be kept comfortable by the hypodermatic administration of one-twelfth of a grain of heroin every six hours. A great many cases require no anodyne and the postoperative pain is certainly no more severe than that following an ordinary plastic operation. In a series of about fifty cases, which I had under observation on the service of Dr. Barton Cooke Hirst, in the Howard Hospital in Philadelphia, it was not necessary to administer morphin to more than two or three patients.

Concerning the value of the metranoikter I quote from a recent personal communication from Dr. Hirst: "As regards the metranoikter, I have used it now in four hundred cases and, while I have not been able to follow up all the ward cases on whom it has been used, I can state without exaggeration that it has doubled the success of my treatment of sterility and has decidedly improved my treatment of dysmenorrhea."

A favorite form of treatment of sterility arising from stenosis, approved by many gynecologists, is the Dudley operation, splitting the posterior and sometimes the anterior lip of the cervix and stitching the mucosa of the canal to the modified skin covering the portico. The Pozzi operation is very similar and is directed at the same result, but by these procedures the constrictions at the internal os cannot be reached, and when we realize that the stenosis in 50 per cent. of the cases occurs here, it appears that the chances for a cure are much better if a metranoikter be used. Simple dilatation is of course of little value though, if the endometrium be involved, an associated curettement is often beneficial.

A number of men, including John Clark and Norris, claim good results from the Wylie drain or pessary, but more especially in dysmenorrhea than in sterility from stenosis. This modified stem pessary or drain is inserted and left in the uterus for several weeks.

While cures undoubtedly result at times from its use, one must consider the danger of carrying infection from the vagina to the uterus, the danger of the pessary coming out of the uterus and ulcerating through the bladder or the rectum. Then, there is a possibility that the groove in the shaft may act as a plug and not as a drain. Consequently it seems that the use of the Wylie drain is not a justifiable procedure, though Norris and Barnard claim that the dangers have been greatly exaggerated and that the instrument has fallen into disrepute through its use in conditions of pelvic inflammation.

Carstens claims rather startling results from the use of his stem pessary, saying that some cases of sterility are caused by poorly developed mucous lining of the uterus and that the presence of a foreign body will strengthen and develop the mucous membrane. This appeals to me as being a dangerous teaching.

It is manifestly impossible in a paper of this sort, to touch upon the etiologic factors of all cases of sterility or to discuss in detail the treatment of the many varieties. The few points I should like to make are that in cases of sterility resulting from stenosis of the cervix or canal the treatment by the operations of Dudley or Pozzi often fail to reach the source of the trouble; the use of the Wylie drain is not free from danger, as admitted by its staunchest advocates and the use of the stem pessary as advocated by Carstens is certainly not to be recommended. So, I believe we are justified in saying that, after considering clinical results, the Hirst-Schatz metranoikter is far superior to other devices for the treatment of sterility ensuing upon cervical stenosis.

NORTHWEST MEDICINE
The Journal of the State Medical Associations of Oregon, Washington, Idaho and Utah.
Devoted to the Interests of the Medical Profession of the Pacific Northwest.
Editorial Office, 719-22 Cobb Building, Seattle, Wash.
MAY, 1911.

EDITORIAL

THE DAILY NEWSPAPER AND THE PATENT MEDICINE ADVERTISER.

It is a well known fact that the daily press is under the subservient control of the patent medicine advertiser and the quack doctor so that the daily papers, with a few noted exceptions, continuously and indiscriminately publish the most monstrous falsehoods and pernicious exaggerations in their advertising columns. Some publications, like *Collier's Weekly,* have recently shown up this whole business in all its nauseating and disgusting details, illustrating the fact that for dirty dollars, the daily press, which is supposed to form public opinion on all important matters, will unhesitatingly serve up to its readers a certain and ready means for permanent injury or that may even cause the death of those nearest and dearest to them. So true is this that the papers do not dare even to expose the frauds and impositions which these fakers and charlatans daily display to the public. The almighty dollar so effectively controls the minds and pockets of the editors and publishers that their conscience is so seared as to overlook these outrages on the innocent and gullible public.

Whenever an editor sees the error of his ways and determines to reject this iniquitous practice, such action is so startling and worthy of public mention that it deserves to be called to the attention of the medical profession and the general public. A gratifying illustration of such newspaper action is presented by the *Yakima Daily Republic,* of Washington, which, in an editorial in its issue of March 18, declares that it has done for ever with the patent medicine impostors. We quote the following forcible language, expressing the attitude of this paper:

"We are of the opinion that those patrons who have the habit of reading the patent medicine ads should take something for it, and that those who have it not should be protected. A rational man or woman ought to be disgusted by the stuff most of these ads contain, and if they are thoughtful and kind enough to subscribe for a paper the publisher ought not to insult them by dishing up the nauseous patent medicine dose to them whether they want it or not, day in and day out. Most patent medicines are rank frauds, and their manufacturers are thieves for whom the newspaper publisher, who wants to have the respect of his people, ought to have no more regard than he has for the get-rich-quick scoundrels against whom the government has lately been so active. There isn't one nostrum out of a hundred advertised in the newspapers which is worth carrying home, and a good many of them are poison. The best thing for a sick man or woman to do is to see a doctor. Hereafter the Republic will not advise any of them in its advertising columns to do anything else."

C. A. S.

THE JULY MEETING OF THE OREGON ASSOCIATION.

Plans are being perfected for the next meeting of the Oregon State Medical Association to be held in Portland, July 10 to 13. The plan of having it a postgraduate course is meeting with every success and such men as Dr. John B. Murphy, of Chicago, have promised to give us one or two lectures on the management and work done at the Mercy Hospital. Dr. J. B. Deaver, of Philadelphia, will give one or two addresses. Dr. Frank Billings, of Chicago, will give two clinics, one on heart cases and the other probably on some of the obscure diseases of the stomach. Dr. Mazyck Ravenel, of the Hygienic Laboratory of Wisconsin, will give two addresses on research work in tuberculosis. Dr. W. J. Butler, of Chicago, will give an address on serum immunization. The entire program is not yet complete but these are just a few of the good things that the Oregon Association, as well as the physicians from neighboring states, will have in store at that meeting.

Dr. J. N. McCormack, the high prophet of the peace conference of the A. M. A., will spend the first week of August doing missionary work in several of the district societies in Oregon. Committees have been appointed from the various organizations for the publicity work and for his entertainment. Dr. McCormack will deliver an address in Medford, one in Eugene, one in Salem, two in Portland, one before the medical society and one before the public, one in Pendleton and one in Baker City. It is assured that his visit will be of great benefit, not only to the legitimate medical profession in the state of Oregon, but it is hoped also that it may have a salutary effect upon the laity who attend these meetings, as no one is more competent to tell the exact relations that should exist between the regular and honorable practitioner of medicine and the public.

C. S. W.

ANNUAL MEETING OF BRITISH COLUMBIA ASSOCIATION.

The thirteenth annual meeting of the British Columbia Medical Association will be held in Vancouver, B. C., on August 31st and September 1st, 1911. The Officers of the Association are President, Dr. O. Weld, Vancouver; Vice-President, Dr. C. E. Doherty, New Westminster; Treasurer, Dr. J. D. Helmcken, Victoria; Secretary, Dr. A. S. Monro, Vancouver; Executive Committee: Drs. G. S. Gordon, R. B. Boucher, J. E. Spankie, Vancouver.

THE JUNE MEETING OF THE A. M. A. AT LOS ANGELES.

The meeting of the American Medical Association at Los Angeles, June 27-30, ought to excite the personal interest of every member of the profession in the Pacific Northwest. The occasions have been so few and at such long intervals for the meeting of this great association on the Pacific Coast that we ought all of us to bestir ourselves to attend the meeting if possible. There will doubtless be a large number of the most distinguished members of our profession present at this meeting. The program of papers prepared, as well as the scientific and pathologic exhibits to be presented, will form an attraction which has not been surpassed on this Coast. The attractions of the city of Los Angeles, together with the seductive influences of Southern California, will themselves be a sufficient inducement to draw a large attendance. The abundance and diversity of entertainments which have been prepared by the profession of Los Angeles will make the occasion memorable in the experience of all who are present. Doubtless many physicians of the North Pacific Coast and interior have never visited Southern California and this will be a unique opportunity of so doing, which will be worth the time of anyone who can arrange to attend. We shall make no attempt to detail the many features of interest which will be presented in the diversified and elaborate program, nor shall we offer a description of the many social features with which visitors will be entertained. While many of these matters have appeared in past issues of the *Journal of the A. M. A.*, they will all be repeated and assembled in one article which will appear in the issue of May 20th. We commend to all our readers a careful perusal of this issue in order that they may become familiar with the good things that are in store for those who visit Los Angeles on this occasion.

C. A. S.

A. M. A. NOTICES

REGARDING THE A. M. A. MEETING AT LOS ANGELES, JUNE 27-30, 1911.

List of Halls and Section Meeting Places

Sections	Name Halls	Location Halls	Name Hotel	Location Hotel
Medicine	Majestic Theatre	7th and Broadway	Lankershim	7th and Broadway
Nervous	Walker (McKinley)	7th and Grand	Westminster	4th and Main
Children	Walker (Lincoln)	7th and Grand	Westminster	4th and Main
Dermatology	Blanchard (Broadway)	3rd and Broadway	Hollenbeck	2nd and Spring
Pathology	Blanchard (Symphony)	3rd and Hill	Hollenbeck	2nd and Spring
Surgery	Baptist Auditorium	5th and Olive	Alexandria	5th and Spring
Genito-Urinary	Blanchard (Music)	3rd and Hill	Hollenbeck	2nd and Spring
Women	Baptist Aud. (Beren)	5th and Olive	Hayward	6th and Spring
Preventive Medicine	Hamburger's	8th and Broadway	Alexandria	5th and Spring
Pharmacology	Walker (Garfield)	7th and Grand	Lankershim	7th and Broadway
Eye	Parish (2nd floor)	6th and Olive	Van Nuys	4th and Main
Ear	Parish (1st floor)	6th and Olive	Angelus	4th and Spring
Stomatology	Dental College	5th and Wall	King Edward	5th and Los Angeles
Commercial Exhibit	Hamburger (4th floor)	8th and Broadway		
President's Reception	Shrine Auditorium	655 W. Jefferson		
Smoker	Hamburger's (Roof)	8th and Broadway		
General Headquarters			Alexandria	5th and Spring

RATES AT LOS ANGELES HOTELS

As Given to the

LOS ANGELES CONVENTION LEAGUE

(To Obtain During the A. M. A. Meeting)

Hotel	Plan	No. of Rooms	One Person Without Bath	One Person With Bath	Two Persons Without Bath	Two Persons With Bath
Alexandria	European	700	$2 to $3	$3 to $5	$3 to $4	$4 to $10
Angelus	"	300	1.50 to 3	2.50 to 5	2.50 to 4	4 to 10
Alvarado	American	100	2.50 up	4.50 up		5 to 7
Astoria	European	200	1.00	1.50	2.00	2.50
Broadway	"	200	1 to 2	1.50 to 2.50	1.50 to 3	2.50 to 4
Fremont	American	100	2.50 up	5 up	3.50 up	6 up
Hampden Arms	European	60	1.00	1.50 to 2	1.50	2 to 2.50
Hayward	"	300	1.50 up	2 up	2 up	3 up
Hollenbeck	"	500	1 up	1.50 up	2 up	3 up
Hollywood	American	200	2 up	4 up	2.50 up	6 up
Ingraham	"	100	2.50 up	4 up	3.50 up	5 up
King Edward	European	150	1 up	1.50 up	1.50 to 3	2 to 3
Lankershim	"	300	1.50 up	2 up	2.50 up	3 up
Leighton	American	125	3 up	3.50 up	5 up	6 to 10
Melrose	"	200	2.50	4.00	3.50	5.00
Munn	European	100	75c to 1	1 to 1.50	1.25	1.50 to 2
Nadeau	"	150	1 up	1.50 up	1.50 up	2.50 up
Natick	"	160	75c up	1 up	2 up	3 up
Occidental	"	200	1 to 2	1.50 to 2.50	1.50 to 3	2.50 to 4
Rosslyn	"	285	75c up	1 up	1.50 up	2.50 to 4
Snow	"	100	1 to 2	1.50 to 2.50	1.50 to 3	2.50 to 3.50
Trenton	"	165	1.50 up	2 up	2 up	2.50 up
U. S.	"	130	50c to 1	1 to 1.50	1.50 up	2 up
Van Nuys	"	160	1.50 up	2.50 up	2.50 up	4 up
Victoria	"	100	1 up	1.50 up	2 up	2.50 up
Watson	"	100	1 up	1.50 up	1.50 up	2 up
Westminster	"	250	1 up	2 up	1.50 up	3 up
Woodward	American	125	2 up	3.50 up	2.50 up	4 up
Westmore	"	100	2 up	2.50 up	4 up	5 up
Yorkshire	European	100	1 up	1.50 up	1.50 up	2 up

MEDICAL NOTES

OREGON.

Fight Against the Plague. The State Board of Health has taken measures to prevent the entrance of the bubonic plague. All incoming, Oriental vessels will be rigidly inspected by deputy state health officers or special agents, and quarantine will be enforced whenever it seems necessary. The expense of the inspection will be met by the municipality where a ship happens to be placed in quarantine. Five thousand dollars a year was appropriated by the legislature for the purpose of discovering a cure for the plague, and also to prevent its being brought to the Pacific Coast. This action, which has also been taken by the California and Washington legislatures, and by the Hawaiian provincial government, is part of the working out of a general plan for the above objects, which had its beginning in the Harvard Medical School. The legislature, however, made no provision for the method in which the money is to be drawn, and Dr. M. R. Edwards, of Harvard, has been in Portland, trying to straighten out the difficulty. He will also go to Olympia, to ascertain what has been done by the legislature of Washington for the same purpose.

"Flyless Town" is the term which may soon be applied to Portland, according to Dr. C. S. White, the State Health Officer. Dr. White is working with the county and city health departments and the city council, and hopes that soon he will have ordinances and regulations which will control these pests. He is also using lantern slides in a campaign of public education, and it is to be hoped that his energetic campaign will produce the results desired.

Superintendent of Sanitarium. Dr. P. H. Fitzgerald, of Gervais, has been appointed superintendent of the State Tuberculosis Sanitarium to succeed Dr. W. J. Clements.

WASHINGTON.

Endorsement of Daily Press. The Yakima County Medical Society at its last regular meeting, April 3, 1911, passed the following resolution:

Whereas, the editor of the Yakima Daily Republic has voluntarily announced, in an editorial under date of March 18, 1911, his disbelief in all patent medicine and its advertising, and his decision to abandon such advertising in the future, and

Whereas, the Yakima County Medical Society deems this a progressive and high-minded attitude toward the best interests of the community,

Be it resolved, that the Yakima County Medical Society does hereby attest its most sincere approval and appreciation of Col. Robertson's stand in this matter, and

Be It Further Resolved, that a copy of the editorial and a copy of this resolution be incorporated in the records of this society.

C. J. Lynch, M. D.
E. F. Chase, M. D.
Chas. E. Keeler, M. D.
Committee.

Deportation of Aliens. Fifteen alien inmates of the Medical Lake Sanitarium are to be deported to their native countries. J. Wiss, United States Inspector of foreigners in public institutions, has been making an investigation throughout the state, with the above result. His investigation is not yet finished, and this number will probably be increased later. At the Steilacoom Asylum, Mr. Wiss found 75 patients who are to be deported.

Doctors Married. Dr. E. L. Doolittle and Miss Bessie Kent were married in Spokane on March 20, 1911, and went to several of the Coast cities on their wedding trip. Dr. and Mrs. Doolittle will settle in Newberg, Oregon. Dr. L. A. Rudow, of Friday Harbor, and Miss Bessie Woodhurst, of East Sound, were married March 28, at Friday Harbor.

The State Board of Health was seriously crippled by the action of the legislature in giving only $27,000 for the next two years' work. The department asked for at least $50,000, and as a consequence of this cut, the value of a large amount of work which has been begun will be lost. This may possibly be taken up later, but on account of the change in conditions it will necessitate doing this work over again.

New Tuberculosis Sanatorium. The new hospital for the anti-tuberculosis league, of King County, is now open for patients. Eight temporary buildings have been erected on a 40-acre tract near the city, and waterworks and a sewer system have been installed. Work will probably begin upon permanent buildings as soon as the president, Mr. H. C. Henry, returns from the East.

Advisory Staff at County Hospital. The County Hospital at Georgetown, Seattle, is to have an advisory staff, according to a recent decision of the county commissioners. Those appointed so far are: Drs. G. M. Horton, J. B. Eagleson, W. C. Gibson, W. Shannon, Grant Calhoun, W. C. Heussy,, C. A. Smith, S. J. Holmes, A. E. Burns, G. S. Peterkin and F. S. Palmer.

The new St Joseph's Hospital, at Vancouver, was dedicated with impressive ceremonies, on Sunday, March 19. Addresses were delivered by Archbishop Christie, Bishop O'Dea and others.

Dr. A. G. Agerton, of Anacortes, has left for a postgraduate course in New York. He will visit at several points throughout the East, returning in about three months.

Free Medical and Dental Services will be given to the school children of Tacoma who are unable to pay for regular medical and dental attention. This decision was reached by the Board of Education the latter part of last month, and steps have been taken toward fitting up an operating room for this purpose.

The Jefferson County Medical Society held a meeting on April 11, at the office of Dr. W. R. Simmons of Port Townsend. Dr. Carrington, of the Marine Hospital Service, read a paper on Pulmonary Tuberculosis.

Dr. B. C. Anderson has been appointed City Health Officer of Spokane by the City Commissioners, to succeed Dr. M. B. Grieve.

Dr. L. B. Rowe, who has recently finished his service as interne in Cook County Hospital, has located in Toppenish.

IDAHO.

Tuberculosis Exhibit at Boise.

Boise had the advantage of a "Tuberculosis Exhibit" during the week beginning April 10, 1911. This was one of the exhibits given by the National Association for the study and prevention of tuberculosis, brought to Boise under the auspices of the Woman's Columbian Club. The following program was provided in connection with the exhibit:

Monday Evening, April 10—Rt. Rev. J. B. Funston, presiding. Address, Attorney General D. C. McDougal. What Is Tuberculosis? Can it be Prevented and Cured? J. M. Taylor, M. D. The Influences of Climate and Heredity in Tuberculosis, J. R. Numbers, M. D.

Tuesday Evening, April 11—Hon. John McMillan, presiding. Commercial Advantages of a Healthy Community, Reilly Atkinson, secretary Boise Commercial Club. Individual Responsibility in Prevention of Tuberculosis, L. P. McCalla, M. D. Bovine Tuberculosis, F. J. Frausdon of Agriculture and Dairy Department, University of Idaho.

Wednesday Evening, April 12—Mayor J. L. Pence, presiding. Relations of Tuberculosis to the Working Classes, L. W. Grubb, second vice-president Retail Clerks' Protective Association. Fraternal Organizations and Tuberculosis, Wilbert H. Lyre, State Deputy M. W. of A. Food, Rest, Fresh Air and Cleanliness in the Prevention of Tuberculosis, Mary Callaway, M. D.

Thursday Evening, April 13—Superintendent C. F. Meek, presiding. Medical Inspection of Public Schools, R. L. Nourse, M. D. Discussion: Opened by E. E. Maxey, M. D., participated in by other Boise physicians; Prof. Meek, superintendent Boise schools; principals of public schools; Probation Officer Helen Coston, and Health Officer M. S. Parker.

Friday Evening, April 14—C. L. Dutton, president Southern Idaho District Medical Society, presiding. Sanatorium Treatment of Tuberculosis, H. P. Ross, M. D. The Physician's Responsibility in the Prevention of Tuberculosis, G. O. A. Kellogg. The Patent Medicine Fraud as Applied to Tuberculosis, Rev. E. B. Fyke.

Saturday Evening, April 15—City Attorney P. E. Cavaney, presiding. The Importance of Early Diagnosis, J. L. Stewart, M. D. Contributory Causes and Popular Misconceptions of Tuberculosis, G. E. Shawhan, M. D. Municipal Sanitation, M. S. Parker, City Health Officer.

The pragram each evening ended with a stereopticon lecture by Mr. Cosper, in charge of the exhibit. The meetings were held in the auditorium and exhibit was in the gymnasium of the high school.

The Late Dr. C. C. Phillips. At a meeting of the North Idaho District Medical Society at Moscow, April 10, 1911, the following resolutions were adopted:

That we enter in the records of this society a minute expression of our deep grief and profound shock because of the death of C. C. Phillips, M. D., of Lewiston, Idaho, a member of our society and a much respected colleague. "His ever genial companionship, happy disposition, and devotion to his profession were an inspiration to all of us." By his death the profession loses an able member, his family a kind and lovable husband, and the community a good citizen. Dr. Phillips, besides the work of his profession, found time to serve on the city council and perform other public duties. He was noted for his kind consideration of all and for his firmness on the side he thought to be right.

Our society wishes to extend our sympathy to the sorrowing family and many friends. The reputation established by the deceased will long be remembered and will stimulate each and every one of us to do nobler and better work.

Resolved, That a copy of these minutes be published in Northwest Medicine, the Lewiston Sunday Tribune, and a copy be forwarded to the family of the deceased.

J. B. Morris, M. D.
J. W. Givens, M. D.
W. H. Carithers, M. D.
John N. Alley, M. D.

Rabies is causing considerable excitement in and about Meadows. It is thought that the epidemic began among the squirrels, was communicated through them to the coyotes, and these animals have bitten several dogs. No persons have been bitten as yet, although several have had narrow escapes.

REPORTS OF SOCIETY MEETINGS

OREGON.

PORTLAND CITY AND COUNTY MEDICAL SOCIETY.

Prest., A. E. Rockey, M. D.; Secty., G. S. Whiteside, M. D.

The regular meeting of the City and County Medical Society was held in their rooms in the Medical Building, Wednesday, April 5, 8:30 P. M., Dr. A. E. Rockey in the chair.

Members present: Drs. Bodine, Buck, Bettman, Baird, Bristow, Connell, Equi, Flagg, J. Flagg, Gullette, Fried, House, Hamilton, Hyde, Ettelson, Jefferson, Johnson, Kiehle, Harry McKay, A. E. Mackay, Mackenzie, Murbach, McArthur, MacLachlan, K. Manion, Marsh, Norden, H. Nichols, O'Day, Parrish, Payne, Pettit, Pease, Matson, Richardson, Rockey, Roth, Rosenberg, Ricen, Rand, Rybke, Sabin, Sheldon, Sternberg, Sommers, Sifton, Townley, Tilzer, Williamson, Wight, Whiteside, Wolf, Yenney. Visitors: Major Pierson, Capt. Reasoner, Dr. Rich.

Pathologic Specimens.

Dr. O. B. Wight showed specimen and reported a case of hydatid cyst of the liver.

Dr. Rand also had a similar case some time ago.

Dr. Sifton says these cases are very common in Iceland.

Dr. Baird reports a case of hydatid of many years standing.

Dr. Mackenzie mentions one in a German woman some years ago.

Dr. Bristow says Dr. Sellwood has a case a month ago.

Paper.

The Wassermann Reaction and 606 in Syphilis. Dr. Ray Matson read this paper. Many modifications of the test to simplify it and to make it more accurate. Is positive in 95-98 per cent. of syphilis. Positive reaction shows spironemas are active and the patient should be treated. Negative reaction does not show anything more than a failure to find the spironemas but is a fair presumption against syphilis. Gives technical details as to methods of making the reaction. He prefers the original Wassermann tests.

Dr. A. E. Mackay reports eight cases, five of them with persistent mucous patches in the mouth. He does not think the results of use of 606 much better than the results of the use of mercury. The remedy is not curative in syphilis. Reports should show Wassermann reaction made in all cases. Thinks we are premature in enthusiasm for 606.

Dr. Whiteside reports twenty-seven cases. Five recurrences. 606 in his opinion does not produce a permanent cure, but, since it certainly clears up many lesions existing at the time the injection is given, it has won for itself a permanent place in the treatment of syphilis.

Dr. Hyde believes salvarsan is symptomatic in its attainment. Does not believe it is a positive cure. Thinks the Wassermann reaction should always be used. We know nothing of the end results. Reports some cases.

Dr. Sabin has used it in twenty-six cases. Regrets the absence of Wassermann tests before and after injection. The literature is somewhat misleading. It is now well demonstrated that it is not a cure. It is, however, one of the most powerful drugs we have in the treatment of syphilis. Reports two recurrences in his series up to date.

Dr. Sommer rises to ask if, after 606 in a case with an eruption whether if the eruption again appears it is not always a squamous one. In one intramuscular case he got a swelling which he opened. After that he gave another. Did not get healing of the lesion. One case of pneumonia which probably had an infarct in the lung. Thinks the intravenous the safest method. In three cases the Wassermann reaction was negative the first time but later became positive.

Dr. Sternberg reports twenty-three cases. Has had a Wassermann before in each case. Does not believe it a positive cure in all cases. Has given four second injections. Thinks it gives better results than mercury. Believes the best results in the old cases of ten or fifteen years standing. Mucous patches quickly disappear. All his injections have been intramuscular in the gluteal region.

Dr. Harry McKay reports rapid and complete disappearance and negative Wassermann after 606 in case of gumma of the abdomen. Reports another case with positive Wassermann, then two injections of 606 with positive Wassermann after. Some other cases showed good results and some disappointment. Has seen some cases of a dermatitis after 606.

Capt. Reasoner, U. S. A., of Vancouver, Wash., reports the examination of 1,200 men with the Wassermann test. In intramuscular mercury injection got negative Wassermann after two months. Then in January began the use of 606. Has used fifty-seven doses in forty patients. Gives technic of his injections. Advises cold water to dilute the solution. In arteriosclerotic cases advises blood pressure. After use of 606 has noticed a gain in weight, so the salvarsan must have done something for the patients. Reports some excellent results. Some clinical recurrences.

Dr. A. E. Mackay proposes a vote of thanks to Capt. Reasoner. Voted.

WASHINGTON.

KING COUNTY MEDICAL SOCIETY.

Prest., G. B. McCulloch, M. D.; Secty., H. E. Coe, M. D.

The regular semi-monthly meeting of the King County Medical Society was held in the Assembly Room of the Chamber of Commerce, Seattle, Wash., at 8 P. M., April 17, 1911. The meeting was called to order by the President, Dr. McCulloch, about 72 members being present. The minutes of the last two meetings were read and approved.

PAPERS.

Appendicitis from the Viewpoint of the General Practitioner. By J. T. Matson. He spoke of the etiology, the significance of symptoms, character and interpretation of pain, the value of the differential leukocyte count, the various types of appendicitis, with a differential diagnosis, and stated in discussing treatment, that it was essentially a surgical disease, with a difference of opinion as to the time of operation in acute attacks. He closed with a clear exposition of the Ochsner treatment.

The Surgical Aspect of Appendicitis. By Bruce Elmore. He considered the subject under the heads of operations of choice and operations of necessity. Under the first he classed all chronic and sub-acute cases, and acute cases which are rapidly improving; while under the second he classed early acute cases, abscess cases and general peritonitis. He considers that the most important symptoms are rigidity and an increase in the polynuclear count. In drainage, cigarette drainage is best and should be removed by the second day. He is strongly in favor of a properly performed irrigation of the abdominal cavity in cases of spreading peritonitis without adhesion.

In discussion, A. O. Loe stated we may have rectro-cecal appendix with abscess formation without rigidity. He thinks it impossible to tell exactly when the danger period is past in choosing the time for operation. To operate when in doubt is better for the patient. Two purse string sutures are better in cases where there is much distention. In drainage cases, a dressing of the deeper parts with balsam of Peru and castor oil is excellent. He objects to irrigation on the ground that it scatters infection.

C. M. Holcomb stated that even the best men differ in their treatment. Some may give cathartics and may delay operation, while other equally good men believe firmly in the opposite treatment. He thinks that Ochsner's rules are the safest.

J. C. Moore called attention to the differential diagnosis from Deitl's crises, uretral stone and acute salpingitis.

S. J. Holmes stated epigrammatically that the relation of the medical man to appendicitis is the relation of the medical man to the surgeon. He reported a case where delay was fatal, and thinks that all cases are cases of necessity.

E. O. Jones stated that Ochsner's method has reduced the mortality of the earlier operators. He gave a historical review of the changes in opinion concerning the time of operation. He favors immediate operation in early acute cases, and strongly condemns irrigation.

S. V. R. Hooker advocates drainage in acute cases with peritonitis, stating that there is very slight danger of hernia. Chronic appendicitis should be operated upon if the patient is to be without access to a doctor for some time. Acute appendicitis during pregnancy may be operated upon without fatality.

H. J. Davidson recommends the administration of small daily doses of an appropriate bacterin in gangrenous cases. He condemns the mania for speed and small incisions in chronic cases, because it does not give time for proper intra-abdominal examination. He objects to irrigation.

Dr. F. T. Hyde stated the differences in symptoms between appendicitis in children and in adults.

F. N. Chessman stated that a leukocyte count is of little value except in determining resistance but the differential count is extremely important. All other symptoms sometimes fail, but the combination of leukocyte count and differential count will not fail.

T. J. Appleton related his personal experience in appendicitis while away from adequate operating facilities, and gave a high percentage of recoveries in unoperated cases. He would allow a limited amount of liquid, and favors the use of mild cathartics.

Alfred Raymond stated that it is the experience of the best men throughout the country that it is very wrong to give aperients of any kind, or to give water by mouth, on account of the certain increase of peristalsis.

J. T. Mason agreed that rigidity is often absent, and states that absolute adherence to Ochsner's treatment will give good results.

Bruce Elmore stated that 36 hours cannot be set as an absolute danger limit. He does not agree that all cases are operations of necessity. He agrees that drainage is important, and is increased by the capillarity of a wet dressing. He does not feel that any good, definite arguments against irrigation have been advanced, and states that when done properly, in cases without adhesion, it accomplishes good results.

Dr. House, of Portland, was called upon, and made a number of complimentary remarks upon the meeting, and upon Seattle spirit.

A. S. Williams became a member by transfer from the Kittitas County Medical Society. The applications of W. C. Kintner, A. S. Tenney and T. R. Loer, of Seattle, were read and referred to the Board of Trustees. F. E. Dent was unanimously elected to membership.

PIERCE COUNTY MEDICAL SOCIETY.

Prest., J. B. McNerthney, M. D.; Secty., E. O. Sutton, M. D.

Regular meeting of Pierce County Medical Society, held at the Tacoma Hotel, Tacoma, Wash., March 21, at 8 P. M., Dr. J. R. Brown presiding.

Paper.

Pulmonary Tuberculosis and Tuberculin Therapy. The paper of the evening was ready by Dr. Joseph Griggs. He first reviews the early conception of tuberculosis and consumption, showing to what a great extent the modern views of its pathology have improved our methods of diagnosis and treatment. The symptoms of tuberculosis are due to the effects of the toxin of tubercle bacilli, particularly on the sympathetic nervous system, often masking the true nature of the disease by a train of neurasthenic symptoms. How many patients have gone for years with a diagnosis of neurasthenia who were actually tuberculous! Febrile attacks with hemoptysis are practically all tuberculous and frequently those without hemorrhage. There is growing belief that infection is often hereditary. Cites instances to illustrate. The subcutaneous tuberculin test is most valuable, often giving a local reaction which may also be of very great curative value. In the treatment great importance is attached to outdoor sleeping, proper diet and graduated exercise, with medicines symptomatically used. Tuberculin is a very great aid in the treatment. Sometimes almost a specific. It should be used in very small doses, avoiding reactions. An initial dose of .00005 mg. to .0005 mg. is advised and the writer has never found it necessary to increase it above .1 mg.

Thirty-four cases are reported, a review of which shows more encouraging results than could have been expected under any treatment not including tuberculin. Care must be exercised—giving tuberculin in mixed infections, although it has been given successfully in conjunction with coccic vaccines.

Discussion: Dr. Quevli condemns the conjunctival test, and large doses subcutaneously. Would avoid reactions.

Dr. Keller takes exception to the statements regarding the unimportance of climate. No one who has not lived in Colorado or New Mexico can appreciate the importance of climate. The speaker has seen so much of the apparent good effects of the climate in these states that he is emphatic in attaching very great importance to climate.

Dr. Edwin Janes has no confidence in any tuberculin test as an aid to diagnosis but is in accord with the writer of the paper with reference to its use in treatment.

Dr. Griggs, in closing, agrees with Dr. Quevli that the eye test should never be used; does not agree with Dr. Keller that climate is of great importance; admits that the tuberculin test, however applied, may be misleading but would treat all doubtful cases as tuberculous until time cleared up the diagnosis.

SPOKANE COUNTY MEDICAL SOCIETY.

Prest., E. D. Olmsted, M. D.; Secty., Frank Hinman, M. D.

There were 49 members and two visitors present at the meeting, held March 30, in the offices of Kalb & Nelson, Hyde Block. Dr. MacKenzie called the meeting to order, Dr. Marshall taking his place as chairman later in the meeting. The minutes of the previous meeting were read and approved.

Paper.

The Relation of the Physician to the Priest. Rev. Wm. C. Hicks, of All Saints Church, read this paper, being a friendly but pertinent criticism of the too materialistic side of the physician's life, which was very favorably received as evidenced by the discussion of Drs. P. S. Byrne, Libby, A. C. Johnson and Wilson Johnston.

Clinical Cases.

Gallstone diseases. S. E. Lambert reported two cases with pain confined to the left abdomen.

In opening the discussion, Marshall commented upon the fact of the extreme rarity of such cases, he and Lambert having failed to find in the literature at their disposal any similar reports.

Neff said he was unable to give an explanation as to the causation of reflected pain in such cases, but that he had made some interesting observations along this line. In a series of cases in whom the gallbladder was being drained a probe had been passed into the bladder and the patient asked to indicate the region in which pain was felt. These investigations showed that in 80 per cent. the pain was referred to the right hypochondrium or the right scapular region; in 10 per cent. to the left scapular region; in 3 to 5 per cent to the left hypochondrium.

H. H. McCarthy exhibited two interesting clinical cases. (1) A locomotive fireman, 25 years old, who had his leg broken one year ago. Shortly afterwards a number of ulcers appeared on the leg which resisted all forms of treatment, even vigorous antisyphilitic. Six days ago began using scarlet red, as suggested by Fischer, of Bonn. This dye was discovered in 1882 or 1884 by Bierback and an able article appeared in the Annals of Surgery last December by Sturgiss, of Johns Hopkins, reporting 80 cases treated with it, 64 of which were ulcers in which healing occurred rapidly. The drug was used in strength of 6 to 10 per cent. with vaselin as a base. Its action apparently was wholly upon the epithelial tissues.

(2) Man who had typhoid last November, which was severe, with delirium, intestinal hemorrhages and high fever. Ice bags were applied over the abdomen for hemorrhages. Later blue spots appeared over the abdomen and limbs, which were very painful to pressure and finally coalesced and sloughed off, particularly on the lower abdomen, leaving a large ulcer. This was skin grafted twice. Began to use scarlet red on the ulcer six days ago with marked improvement almost immediately.

Johnson opened the discussion by relating a personal experience he had in Hocheneg's clinic with a large varicose ulcer. This was about three inches in diameter and had resisted all forms of treatment for three weeks, when Fischer's article appeared. Scarlet red was immediately tried on the ulcer which showed from the first day remarkable improvement. Fischer advised starting the solution of the dye with a few drops of chloroform followed with olive oil and then vaselin.

Frank Rose raised the point as to diagnosis in the two cases. He classed the first as traumatic ulcers; the second ulcers due to typhoid bacilli infection possibly with secondary infection.

Wheeler completed the history of the first case as follows, he having seen the case before McCarthy. A large scar resulted after healing from the original injury. This scar the patient asked to have removed, which was done.

and a stitch abscess resulted. This was treated with bichlorid applications, giving a dermatitis of which the ulcers were the final result.

Matthews asked regarding the toxicity of the dye.

Wilson Johnston said he had used the drug for several years without any toxic results. Its use, he said, had raised the question as to whether such vigorous stimulation of the epithelium might not lead to the formation of epithelioma.

Lambert expressed enthusiasm for the drug though he had not as yet used it. At Johns Hopkins he believed they were using some mercury and balsam of peru with it.

O'Shea said he had often noticed blue spots on the abdomen and legs following the use of ice bags but without any breaking down.

Neff remembered a case in which ice bags had been applied continuously to the chest by mistake, causing great sloughing and leading to law suit.

C. F. Eikenbary demonstrated his apparatus for stretching the leg in fracture of the femur and certain hip joint conditions.

Sarcoma of the Tibia. A. A. Matthews reported a case in a young 15-year-old girl. Nine months ago she had been kicked on the shin by her little sister. This place had remained sore to pressure and three months ago a small swelling appeared which was sore and painful to pressure. It had been opened under local anesthesia for presumable pus, which was not found. The diagnosis of osteosarcoma was made from macroscopic appearance and an amputation of the upper third of the tibia performed.

Neff, in opening the discussion, related the interesting case of a switchman with a tumor of the upper tibia who promised to return for a completer history and failed to do so.

J. G. Matthews spoke of a case of purported osteosarcoma of the external malleolus in which amputation of the thigh had been performed, followed in six months by recurrent metastases to the scalp and upper parts of the body and death in a few weeks.

Doland reported having seen a similar case to Neff's which had refused amputation. In this case Coley's fluid had also been tried without results, and he thinks Coley is about the only one who gets results with his serum.

Charleton asked regarding the relative malignancy of the different cell-type tumors.

A. C. Johnson spoke of the fact of operation apparently increasing the malignancy of sarcoma. The reason, unknown. Coley has attempted to stop this metastasis by ligating the veins and has ligated the femoral high.

Rose drew the society's attention to an article on mice tumors in the J. A. M. A.

Hinman said that giant cell sarcoma is relatively the least malignant of the sarcomata of bone and should be treated by the most conservative means. The other forms of the relatively malignant sarcomas occur much less frequently than giant cell sarcoma, as the periosteal osteosarcoma, chondromyxosarcoma and the periosteal fibrosarcoma. The more malignant periosteal and medullary sarcomata demand radical treatment.

Matthews, in closing, said that Coley was himself the strongest advocate of his serum. Metastases seldom occur in the local field of operation so that extensive operation is not indicated. Most malignant tumors occur in the femur and humerus.

The following resolution submitted by Dr. Libby was passed: "Whereas, there have recently appeared certain newspaper articles describing under glaring headlines surgical operations performed by certain members of this society, which action is beneath the dignity of the members of the Spokane County Medical Society and in violation of the code of ethics of the American Medical Association:

"Be it resolved, That it is the sense of this society that such publications are degrading to the medical profession; a violation of the letter and spirit of the principles of medical ethics and a blot upon the good name of the Spokane County Medical Society."

It was then ordered that the secretary be instructed to send a copy of these resolutions without comment and a copy of the by-laws, Sec. 7, Art. 2, particularly referring to this matter, to each of the daily papers of Spokane.

The Spokane County Medical Society held its regular bi-weekly meeting in the assembly room of the Y. M. C. A. Building, Thursday evening, April 13, 1911.

PAPERS.

Tuberculosis of the Kidney. Dr. J. G. Fleming read a complete paper on this subject.

In opening the discussion, Dr. Whiteside, of Portland, said he questioned whether there was as much as 10 per cent. of ascending infections of the kidney. Pain, he said, was not due to infection but to a lesser or greater degree of distention. The sensitiveness of the bladder is an important index to dosage in the administration of tuberculin. Frequency and urgency of urination following the giving of tuberculin is in its degree a better index as to dosage than the opsonic index. The finding of tubercle bacilli in the urine is a very difficult and tedious performance. It is much easier to inject a guinea pig with the centrifugalized sediment and then if one pinches the glands of the groin these glands are earlier attacked by the bacilli if present and an earlier diagnosis can be made. It is extremely important in a nephrectomy to know the condition of the other kidney.

Hinman reported two cases of kidney tuberculosis in which the bladders were involved in secondary infections, one with colon B., the other with mixed strepto and staphylococci. Both had unilateral kidney tuberculosis and both refused operation. One apparently has completely recovered under tuberculin and colon vaccins, the other is much improved after being treated with autogenous vaccins and tuberculin.

The Importance of Exact Methods of Diagnosis in Pathologic Conditions of the Bladder and Kidneys. Dr. Geo. S. Whiteside, of Portland, read this very interesting paper and exhibited lantern slides illustrating points in cystoscopic diagnosis.

Flemming, in discussion, emphasized the just criticism of the usual careless examination of patients.

Neff asked for details in the methods used by Whiteside, particularly in regard to the dilatation of the pelvis of the kidney.

Marshall spoke of the diagnostic significance of blood pressure that there was no very appreciable rise unless there was renal involvement. Cited case which finally died in uremic coma that had been by some considered a brain tumor.

Dr. Whiteside, in closing, referred to the mot of some man whose name he had forgotten, in Rochester, Minn., to the effect that more than 30 cc. in the pelvis means hydronephrosis and the patient should be operated upon. This he does not believe but there is an individual variation in the capacity of the pelvis and where one finds it to contain from 50 to 100 cc. you can be sure of a dilatation. Does not like argyrol because it colors the filling fluid too quickly but methylene blue does not color sufficiently as to prevent seeing through the fluid. He prefers blue colored boric acid solution as a dilating fluid and, so long as the filling fluid in the bladder is not colored sufficiently to obscure vision, there has not been much leakage.

The following amendment to the by-laws was adopted: "The roll call shall not form a part of the regular order of business. An individual record of attendance shall be kept by the secretary."

WHATCOM COUNTY MEDICAL SOCIETY.

Prest., F. V. Shute, M. D.; Secty., E. D. Hatch, M. D.

The annual banquet of the Whatcom County Medical Society was held at the Cafe Richelieu, April 10, at 8 o'clock. Plates were laid for twenty-five members and visitors and Manager Armstrong, assisted by a quartet of fair waitresses, served a repast in his usual first-class manner fit for the gods. The tables were set with bouquets of pinks and sweet music, contributed by a Victrola, placed in an alcove of the dining hall, lent its charm to the occasion.

Among those present from out of town was Dr. C. W. Sharples, of Seattle, who rendered the paper of the evening, entitled Abdominal Pain, which, considering the abundance of good things served by Manager Armstrong, was a very appropriate subject. Drs. A. Macrae Smith, S. H. Johnson and W. C. Keyes responded.

Dr. J. Reid Morrison, of Bellingham, presented the society a box of cigars, the reason of which was a baby girl that the stork left at his home last week Dr. McCulloch, of Seattle, a specialist in diseases of children, undertook, at the suggestion of President Shute, to outline a course of procedure for Dr. Morrison as to the care of the infant, much to the delight of all present.

Dr. Markly spoke on evening office hours, the doctor thinking that the medical men should follow the example set by their legal brothers and at least close their offices after dinner and thus abolish the evening hour.

Dr. Clark, of Sumas, was the next speaker, and all enjoyed his remarks, as they pertained to an invitation to visit him in a body at his home some time next summer.

Dr. O'Shea, of Seattle, made a few very bright remarks and brought forth a round of applause.

At this point Dr. Beebe, of Everson, proposed to President Shute that Dr. Brier, of South Bellingham, tell a story and it is needless to add that the portly, good natured M. D. from Fairhaven entertained the gathering in his usual happy manner.

Dr. Van Kirk added a personal experience about abdominal pain and the society adjourned at a very early hour.

The following were present:

Drs. C. W. Sharples, O'Shea and McCulloch, Seattle; Shute, Ruge, Kirkpatrick, Van Kirk, Markly, Birney, Ballaine, Torney, Keyes, Erb, Cook, Morrison, Johnson, Goodheart, Brier, Smith, Hatch and Wear, Bellingham; Clark and Pinckard, Sumas; Beebe, Everson; Meridth, Nooksack.

IDAHO.

SOUTH IDAHO DISTRICT MEDICAL SOCIETY.

The spring meeting of the society was held at rooms of Boise Commercial Club, April 14, 1911, President C. L. Dutton presiding.

Report of the secretary-treasurer was read and approved.

Committee on arrangements reported arrangements for meeting and noon lunch at Commercial Club rooms.

This being the annual meeting for election of officers, the nominating committee was asked to report. The counties not being represented by the members of the committee present, the chair appointed Drs. McCalla, Numbers, Goodfriend, Nourse and Glase to act as nominating committee.

A short recess was taken, after which the nominating committee reported as follows:

President, Dr. O. A. Kellogg, Nampa; vice-president, H. Goodfriend, Albion; members of nominating committee of State Association, W. T. Drysdale, New Plymouth, alternate, C. L. Dutton, Meridian; fellows of governing board of State Association, James L. Stewart, C. R. Hudgel, J. A. Young, O. H. Avey, John Boeck; nominating committee of District Society, Ada County, J. M. Taylor; Blaine County, E. W. Kleinman; Boise County, Wallace Johnson; Canyon County, R. J. Cluen; Cassia County, J. C. Patterson; Lincoln County, C. W. Dill; Owyhee County, J. C. Bartlett; Washington County, S. B. Dudley.

The report of the committee was accepted and on motion the secretary was instructed to cast the ballot of the society for those named for the respective offices. Secretary-treasurer, R. L. Glase, held over, was elected for two years.

The meeting was held during the presence in the city of the exhibit by the National Society for the study and prevention of tuberculosis, so the program was devoted almost entirely to topics relating to the "White Plague." After opening remarks, by President C. L. Dutton, Dr. R. L. Nourse, of Boise, presented a paper on **Sarcoma of the Choroid**, showing specimen removed from a case in which the condition had existed several years after diagnosis before the patient would submit to operation. Paper was discussed by Dr. Maxey.

Symposium on Tuberculosis. This was led by Dr. L. P. McCalla on **Responsibility of the Individual in Prevention** and Dr. J. R. Numbers on **Climatic and Hereditary Influences.**

These were followed by interesting general discussion, in which practically every one present took part. The most important points brought out were: (1) that climate alone will not cure nor arrest the disease, is, in fact, only one element in treatment, and that, all things considered, a change of climate is by no means always to be recommended; (2) that direct heredity though a rare possibility is insignificant as a cause, as compared with danger of infection by association in the home; (3) the urgent need of the education of those infected and those associated with them, in the principles of prevention; (4) the need of state sanataria for those who are not able to afford proper treatment.

Tuberculosis of the Kidney. Dr. J. L. Stewart, of Boise, spoke on this subject, mentioning cases in his own practice that had existed from 5 to 7 years with little or no progress as far as symptoms indicated. This topic was discussed by Drs. Kellogg, Glase, Taylor and Goodfriend.

The Physician's Responsibility in the Prevention of Tuberculosis. Dr. G. O. A. Kellogg, of Nampa, presented a paper on this subject, and Dr. H. P. Ross, of Nampa, one on the **Sanatorium Treatment of Tuberculosis.** There were read at a public meeting in the evening, held in connection with the tuberculosis exhibit.

BOOK REVIEWS

Edited by Kenelm Winslow, M. D.

Diseases of the Stomach and Intestines. By Boardman Reed, M. D., late Professor of Diseases of the Gastro-Intestinal Tract in the Department of Medicine of Temple University, Consulting Gastroenterologist to the Pottenger Sanitarium, etc., etc. Illustrated. Third edition; thoroughly revised and largely rewritten. Cloth; Pp. 1037; $5.00. E. B. Treat & Co., New York.

This work is divided into 83 lectures or chapters. The style is colloquial and easy but the matter incomplete and antiquated in many instances. There is new matter relating to the digestive troubles of the tuberculous and a new chapter on arteriosclerosis. Also chapters on intestinal obstruction have been written by Dr. J. P. McReynolds. In differential diagnosis especially the book is weak. In that relating to ulcer we find the old scheme of Ewald showing how to distinguish it from cancer, hyperacidity and gastralgia (!) Among the chief disorders we should consider in the diagnosis, chronic appendicitis and gallstones, the former is wholly forgotten and of the latter the writer says, "The pain and tenderness are well to the right of the median line, the pain is far more intense and there is no connection between the attacks and the period of digestion. Hemorrhage will be absent and jaundice and some fever often present." In the differential diagnosis of ulcer no mention is made of renal and pancreatic lesions, angina or gastric crises, not to speak of the various systemic diseases simulating ulcer. The modern conception that pyloric spasm and hypersecretion are but symptoms, as cough or chill, will be searched for in vain. It is true that under pyloric spasm we find some of the etiologic factors, and under hyperchlorhydria a few more, but nowhere do we find stated that the presence of one or both should always suggest the presence of ulcer, gallbladder disease, chronic appendicitis, renal lesions, adhesions about the "attic of the abdomen," pancreatic disease, tuberculosis of the cecum, eye strain and neurosis. Pyloric spasm is nature's attempt to place the pylorus in a splint, like spasm of muscles in hip joint disease. This irritation may be internal (excess of acid), external (infection) or remote.

The symptoms of some of the more important lesions are incomplete and imperfect. The salient points, as developed by Graham in ulcer symptomatology and history are wanting and the fact that the tender points and hemorrhage, upon which emphasis is laid, are more often absent than present is not forthcoming. There is a long and rambling disquisition on appendicitis, with the surgical side of which the author is evidently not conversant, although he gives us in detail an account of his personal sufferings and experience with the disease. After considering the pro's and con's regarding operation the writer concludes by recommending a medical treatment for "acute catarrhal cases" which are not too severe. He omits to tell us how one can sense the mild from the severe cases until it is too late. It would have been better had he shown how chronic appendicitis simulates most other digestive disorders instead of informing us how to palpate the appendix so as to discover whether it is thickened and the subject of chronic inflammation. And instead of offering medical treatment he should, with Osler, have been content to remark, "There is no medicinal treatment of appendicitis," and no medical treatment either.

WINSLOW.

Practical Treatment. Volume I. A Handbook of Practical Treatment. In three volumes. By 79 eminent specialists. Edited by John H. Musser, M. D., Professor of Clinical Medicine, University of Pennsylvania, and A. O. J. Kelly, M. D., Assistant Professor of Medicine University of Pennsylvania. Volume I: Octavo of 909 Pp., Illustrated. Philadelphia and London. W. B. Saunders Co., 1911. Per volume: Cloth, $6.00; half morocco, $7.50.

This first volume of what promises to be a thoroughly modern work is devoted largely to a number of general discussions by competent authors on prophylaxis, diet, drugs, rest, exercise, massage, mechano-therapy, psychotherapy, hydrotherapy and other well known therapeutic measures, also organotherapy, serum therapy, bacteriotherapy, vaccine and chemotherapy. Drugs, as the editors point out, although often of much importance, are no longer the chief reliance in the management of disease, and rightly so, because of their uncertain action, and the difficulty of accurately estimating their assumed efforts. The chapters on diseases of the blood, by R. C. Cabot, and those of the lymphatic system and ductless glands, by Geo. Dock, reflect the best medical teaching of our highest authorities and deal with laboratory findings, rather than theoretical discussions of the phases of disease. The names of the 79 collaborators are a sufficient guarantee of the value of this work which need no commendations.

VON PHUL.

Modern Treatment: The Management of Disease with Medicinal and Non-Medicinal Remedies. By Eminent American and English Authorities. Edited by Hobart Armory Hare, M. D., Professor of Therapeutics and Materia Medica, Jefferson Medical College, Philadelphia; Physician to the Jefferson Hospital; Author of "A Text-book of Practical Therapeutics," "A Text-book of the Practice of Medicine," etc.; assisted by H. R. M. Landis, M. D., Medical Director to the Phipps Institute for Tuberculosis and Physician to the White Haven Sanatorium. In two very handsome octavo volumes, comprising 1800 pages, with numerous engravings and full page plates. Price per volume in cloth, $6.00, net; half morocco, $7.50, net. Lea & Febiger, Publishers, Philadelphia and New York, 1911.

A painstaking and perspicacious work; practical, concise, and adapted to a busy doctor's uses. Anything written or edited by Hobart A. Hare is worthy attention. Considerable space in the present volume is devoted to treatment of syphilis, by one of the collaborators, Dr. Gottheil, and dioxidiamidoarsenobenzol ("606") is considered. "The therapeutic effects are not striking." "Nothing can be said of the permanence of its effects, nor as to possible deleterious action; though we should be on the lookout for possible optic trouble from relation of the drug atoxyl." The book is comprehensive and has many helpful suggestions on the puerperal state, diseases of the genito-urinary apparatus, and medical treatment of the eye. It is one of the best books that has appeared lately.

CRUTCHER.

A Manual of Diseases of the Nose, Throat and Ear. By E. Baldwin Gleason, M. D., Professor of Otology at the Medico-Chirurgical College, Philadelphia. Second revised edition. 12mo of 563 pages, profusely illustrated. Philadelphia and London: W. B. Saunders Company, 1910. Flexible leather, $2.50, net.

"The essential facts of rhinology, laryngology and otology in as concise form as possible" is a fully justified claim of the author. That so much of such a broad subject could be included in a book easily held in one hand is a marvel; and in contrast with the average bulky and expensive text-book this modest volume is a happy find. The field is covered completely, and the gist of every branch subject is given, with some interesting elaborations.

Historical references to the development of operations and methods of treatment are numerous, and some quotations from older writers, standard in their time, show prognosis pessima replaced now with prognosis bona, the result of our modern methods. The subjects of "catching cold," atrophic rhinitis, hay fever and others are discussed in a most interesting manner. Some forty pages are devoted to formulas and many excellent prescriptions are given. For the general practitioner the book fills the requirements completely, it would seem, and at a nominal cost; while to the specialist it is a valuable addition to his library. SEELEYE.

A System of Ophthalmic Operations. By Casey A. Wood, M. D., with Frank Aleport, M. D., L. L. D., Adolph Alt, M. O., M. C. P. S., Edward Jackson, A. M., M. D., Harry V. Würdemann, M. D., and twenty-six other collaborators. Completely indexed and illustrated with Eighteen Color Plates and over One Thousand Drawings in Black and White, many of them Original. Complet in Two Co'umes. Cleveland Press, Chicago, 1911.

The work begins with an historical chapter, condensed to the period of Donders, giving the biographies of some of the representative ophthalmic surgeons and the unique instruments used, dating from the 12th century, of the Arabs and Egyptians, Romans and Greeks. The chapter on the forensic relations of ophthalmic surgery covers such a wide field and deals so minutely with the legal conditions that one must read very carefully unless previously familiar with the subject. The writer of this chapter gives much credit to Magnus and Würdemann for their work on "Visual Economics" and abstracts it in twelve pages. There is a cut showing the removal of a prothesis by means of a finger end, but it does seem better and cleaner, certainly surgically cleaner, to use a sterile hook that is manufactured for this purpose. The chapter on transplantation of the cornea reports all the authentic operations from the original one of Reisinger to that of Von Hippel, with the failures as well as the successes, and the method used by each operator. The work is profusely illustrated, many of the chapters showing original cuts never before published, notably so in the chapter on Surgical Treatment of Injuries to the Visual Apparatus. MACWHINNIE.

The Blues; Causes and Cure. By Albert Abrams, A.M., M.D., F. R. M. S., Consulting Physician, Denver National Hospital for Consumptives, The Mount Zion and French Hospitals, San Francisco, etc., etc. Illustrated; Fourth Edition. Revised and Enlarged. Pp. 295. Cloth, $1.50. E. B. Treat & Co., New York.

We have noticed this book a number of times in this journal. Abrams, like many another enthusiast, sees only the causation and remedy which occupy his mind. This is the causation of neurasthenia through relaxation of the abdominal veins, with venous congestion and irritation of the splanchnics, derangement of the liver and autointoxication. It may be partly effect as well as the cause of neurasthenia. The chief symptoms are tenderness of the belly and liver, enlargement of the latter and tympanites. How many cases of neurasthenia present these symptoms? The treatment is directed against this state and includes massage of the liver, special exercise, sinusoidal current, etc. This view may apply in certain cases of neurasthenia and is well worth our attention if we do not become converts to the faith. Abrams has several special tests which he applies to aid diagnosis. The book appears to have a large and continuous circulation. WINSLOW.

A Text-Book of General Bacteriology. By Edwin O. Jordan, Ph. D., Professor of Bacteriology in the University of Chicago and in Rush Medical College. Second revised edition, octavo of 594 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1910. Cloth, $3.00 net.

This, the second edition of Prof. Jordan's excellent work, contains but 23 pages in excess of the first edition, published in 1908, which is of itself a recommendation, since it evidences the fact that the author has adhered to the brevity of expression and terseness of style so recommendable in the previous work. The new matter gives everything dependable regarding the recent advances in bacteriology and relates to the treponema pallidum, Wassermann serum reaction, meningococcus serum and bacteriology of agriculture, arts and industries. As a whole, we consider this as one of the best American text-books on this subject because of the author's adherence to demonstrated facts, freedom from exploded theories, and surplus verbiage. WEST.

Principles of Public Health. A Simple Text Book on Hygiene Presenting the Principles Fundamental to the Conservation of Individual and Community Health. By Thos. D. Tuttle, B. S., M. D., Secretary and Executive Officer, State Board of Health, Montana. Cloth, 186 Pp. Illustrated. World Book Co., Yonkers-on-Hudson, New York.

One cannot speak too highly of the common sense and discrimination employed in writing this little book for the use of our school children. The illustrations are particularly happy in presenting to the eye and mind—by a coup d'oeil—in the most picturesque, forcible and impressive manner the points that are desired to be absorbed and retained. WINSLOW.

Practical Dietetics With Reference to Diet in Disease, by Adlida Frances Pattee, Graduate Department of Household Arts, Massachusetts State Normal School; late Instructor Dietetics, Bellevue Training School for Nurses, Bellevvue Hospital, New York, etc., etc. Sixth Edition, revised and enlarged. Cloth. Pp. 475. $1.50. A. F. Pattee, Mt. Vernon, New York, Publisher.

This is an exceptionally good little book and has been favorably commented on in Northwest Medicine before. Combining a good cook book with diet lists for the sick, taken from the leading practitioners and hospitals of the country, in this edition is a new and valuable feature. After the recipes for each dish will be found the energy value computed in calories. Thus we look under "Egg Poached in Milk" and find it equals 470 calories; under "Spinach," 1 serving, 27 calories. While originally dedicated to nurses and generally used by them it has been adopted by the U. S. A. hospitals and schools in many places and is regarded as an authority in its sphere.

WINSLOW.

Lessons on the Eye. For the Use of Undergraduate Students. By Frank L. Henderson, M. D., of St. Louis. Fourth edition; revised. 12mo of 238 pages, illustrated. Cloth, $1.50. P. Blakiston's Sons & Co., Philadelphia, 1910.

As a guide to a quiz course on the eye, in preparing for a state board examination, this terse little book might answer very well; but we fail to appreciate its usefulness to the undergraduate, since it lacks association of ideas upon which successful teaching depends so largely. Bare facts make hard reading and are retained with difficulty. SEELEYE.

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The Journal of the State Medical Associations of Oregon, Washington, Idaho and Utah
ISSUED MONTHLY BY NORTHWEST MEDICAL PUBLISHING ASSOCIATION.

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DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF THE PACIFIC NORTHWEST
Subscription Price $2.00. In clubs of twenty or more $1.00.

Entered March 14, 1903, at Post Office, Seattle, Wash., as Second Class Matter, under Act of Congress of March 3, 1879.

VOL. III. New Series. JUNE, 1911 No. 6

ORIGINAL CONTRIBUTIONS

ANTERIOR POLIOMYELITIS.

By R. L. Gillespie, M. D.,
PORTLAND, ORE.

On account of several epidemics which have of late occurred in different localities, there has been a good deal written in the medical press, much discussion in medical societies, and more or less sensational articles in the law press, regarding the rather mysterious and always serious disease, anterior poliomyelitis. I say mysterious, because the causative factors and mode of spread are little understood and serious, because it most always leaves the patient in a more or less crippled condition, if he survive the initial attack.

It occurs in both sexes with about equal frequency, with no history of its being inherited. Children of all ages may have the disease, but the period of maximum liabiliy is from the first to the fourth year inclusive, for the records show that, out of 1718 cases reported up to the tenth year, 1450 occurred during the first four years of life, the critical time being perhaps during the second and third years, since 1000 of the above cases occurred at that time.

All authorities agree that the disease develops most commonly during the warm season, and particularly so if it be unusually dry. This is especially true in England and America, for the epidemics that have occurred in different localities have always been during the summer months, and the total number of recorded epidemics is now forty-six or forty-eight, June, July, August and September holding the record of 1211 cases out of 1456 occurring during the year.

The occurrence of the disease in epidemic form was first recorded by Colmer in 1843, and from that time to the present some forty-six or forty-eight epidemics have been reported, but since 1907 the disease has attracted more attention than throughout all the years past, for at that time there was a collective investigation committee from the New York Neurological Society, appointed by the president, Dr. Chas. L. Dana, to make a statistical study of the epidemic which occurred in New York City in 1907. A like committee was appointed by the section on pediatrics, of the New York Academy of Medicine, and Dr. Bolduan, of the New York City board of health, Dr. Simon Flexner, of the Rockefeller Institute, and Dr. Henry Ling Taylor, of the section on Orthopedics of the New York Academy of Medicine, were invited to become members of the committee. It was estimated that 2000 cases occurred in the 1907 epidemic in and about New York, but reports were received from only 750. These were carefully studied and analyzed with a view of enlarging our conception of the disease.

The action of the medical bodies spoken of would indicate the importance of the subject, and their findings only show the lack of a general understanding and accurate knowledge, that is so necessary in coping with diseased conditions. It is the mass of material brought out by such collaboratory work that will cause the attention of the profession to be focused on a disease and add to our knowledge of the same.

The man doing special work along nervous lines does not often see a case of infantile paralysis at the beginning, for the family physician is called and from early symptoms presented will probably treat the case symptomatically, believing he has some trivial ailment of the child to deal with, and leaves the patient with direction to call him again if necessary. Upon again being called he finds his patient paralysed, when he begins to look up and take notice.

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*Read before the Sixteenth Annual Meeting of Utah State Medical Association, Salt Lake City, Utah, Oct. 3-4, 1910.

I have been called early in a number of cases during the epidemic in the Northwest in my own locality, in Portland. I have tried to note carefully the early symptoms in cases which proved afterwards to be anterior poliomyelitis and find the ordinary book descriptions quite at fault. They will tell you there is no difficulty in recognizing the disease and it is hardly likely to be mistaken for anything else. This may be a fact after the paralysis has supervened, but prior to that time I believe it is quite difficult to say whether you have only a mild case of intestinal disturbance or some other condition which we ordinarily meet wth in every day practice. In one-seventh of the cases reported diarrhea was present, and much stress has been laid upon this early symptom but when we consider that, during the months of prevalence of infantile paralysis diarrhea in infants would also be prevalent, it is not surprising that diarrhea should be spoken of as an early symptom but as anterior poliomyelitis is a specific infectious disease, characterized pathologically by general toxemia, the diarrhea may or may not be resultant therefrom.

Some writers claim that the bowels are constipated, that the fecal matter is dry and scybalous and the diarrhea is a result of this. However, intestinal disorder as a symptom seems to have considerable weight by most observers and in my own cases it has been frequent. So also have been other conditions that are so often met with in general practice, such as sore throat, bronchitis and even pneumonia, chills, convulsions, vomiting, etc., but are not constant enough to be either symptomatic or diagnostic.

As to diagnoses, let us take up the matter a little more in detail. Fever occurs in the majority of cases, ranging from 100° to 104° or 6°; occasionally fever is absent. The fever does not last more than three or four days as a rule, but may last for a week but in only about 1 in 7 cases. Vomiting occurs in about 25 per cent, but is usually of short duration. In those old enough to tell you there may be chill or chilly sensations. *Extreme restlessness occurs in over half the cases;* delirium supervening in about one-fifth of the restless cases. In contrast to this, in cases where the lesion is high up, we may have changed or altered respiration, apathy or stupor and rigidity of the neck which come under the category of Wickman's meningeal type. Almost all cases have pain and tenderness during first few days. In about one-half the cases it is quite and in many instances very severe. The pain is most often in the lower extremities, next in frequency in the spine and trunk and still less in the upper extremities and neck. There may also occasionally occur a papular eruption which may cover the entire body.

In about one-quarter of the cases paralysis may be observed at the onset of the affection or during the first day and in more than 90 per cent paralysis is well advanced by the third day. In four-fifths of all cases the paralysis begins in one or both legs, showing a preponderance of lumbar involvement. Some one of late has said that there was absence or retarded deep reflexes and increased superficial reflexes. The New York reports give about one-half of absence of patellar reflex. My own observations coincide with the above in a series of about forty cases.

The mortality in this country during epidemics has been much less than in Norway and Sweden, as has also been the number of adult cases reported. The disease has affected those mostly of the susceptible age period, although we have a certain proportion of adults. Undoubtedly there are a number of deaths from this disease reported that are due to encephalitis and other conditions but they have not affected the mortality to any great extent, which is given at from 7 to 10 per cent. The cases I have studied have been about the same.

We are all interested in the pathology and bacteriology of this disease. I can do no better than to quote verbatim from an abstract of a paper on "The Pathology and Bacteriology of Acute Anterior Poliomyelitis," by Drs. H. E. Robertson and A. J. Chesley, of Minneapolis, read at St. Louis, Mo., before the section on "Mental and Nervous Diseases" of the A. M. A. this year, published in the *A. M. A. Journal* of Sept. 17, 1910. The complete article will be published in the transactions of the section and in the archives of internal medicine.

"A review of the literature shows records of about 100 autopsies on cases of poliomyelitis, nearly one-half of which were performed years after the acute attack. Our studies include material from six autopsies performed on cases occurring in the Minnesota epidemic of 1909. (In the article the cases are reported in detail.) The process as a whole follows a definite and specific course. Whatever may be finally shown to be the agent of infection, its 'optimus locus' is in the perevascular lymph channels of the anterior portions of the cord, especially those located in the gray matter. From this site the reaction spreads on the one hand to the surrounding tissue spaces of gray matter and on the other to the lymph channels of the white matter and pia, often involving the posterior portions of the cord.

CONCLUSIONS.

(1) Acute anterior poliomyelitis is a specific infectious disease, characterized pathologically by general toxemia affecting the parenchyma of the heart, liver and kidneys, and the lymphoid tissues of the

body, but spending itself locally on the structures of the spinal cord.

(2) Grossly the cord is congested and on transverse section shows softening and often hemorrhage in the gray matter of the anterior horns.

(3) In the cord the infectious agent is located in the perivascular lymph channels of the anterior portions, especially invading the gray matter, but extending to the white matter and pia and occasionally the posterior horns. The brain, stem and basal ganglia may be involved. In the cord the medulla and cervical and lumbar swellings are particularly affected.

(4) The characteristic lesion consists of collections of cells in the perivascular and pial lymph channels and tissue spaces of the anterior horns. Of these cells the polymorphonuclear leukocytes appear early and are relatively few in number. They are soon displaced by endothelial cells arising from proliferation of the lining endothelium and lymphocytes coming from the blood and lymph streams.

(5) Edema of the interstitial tissue and degeneration and destruction of the ganglion cells are always present.

(6) The vessels are congested, their walls degenerated and the capillary branches in the gray matter irregularly distended and often ruptured, giving hemorrhages which always intensify markedly the amount of destruction. Thrombosis was not observed.

(7) Early degeneration of nerve fibers from the anterior roots is a constant feature.

(8) Stains for microorganisms were uniformly negative.

Bacteriology.

Specimens from twenty cases of poliomyelitis were examined by the laboratory division of the Minnesota State Board of Health during the 1909 epidemic. The cultural and morphologic characteristics of Geirsvold's diplococcus were found to coincide with the description given by Drs. Fox and Rucker.

Geirsvold's diplococcus was found in purity in the spinal fluids from seven cases, and also in cultures from the blood, mouth, lungs, spleen, kidney, middle ear and brain substance (In case 3 of Dr. Robertson's.)

The tests to determine the pathogenicity of these pure cultures confirmed the opinion of other observers that Geirsvold's diplococcus is not a causative factor in poliomyelitis.

The spinal cords of 38 animals experimentally infected failed to show specific lesions of poliomyelitis, though in some animals motor disturbances developed which might have been mistaken for the symptoms of poliomyelitis. The presence of specific lesions was regarded as the crucial test.

We believe that symptoms of inoculated animals must be supported by pathologic findings to have any value as experimental evidence."

The question is, what shall we do? This will particularly apply to the family physician, remembering the serious aftermath of this disease and its consequences. We should first be careful as to our diagnosis. I think most men in general practice are inclined to be in too much of a hurry in prescribing in so-called minor ailments, and take too much for granted. Sporadic cases of acute anterior poliomyelitis are met with more or less and the diagnosis not made until paralysis supervenes. I believe this is excusable, but I think we should always be on the watch for this serious condition. I do not know, by an early diagnosis, whether we could mitigate the disease, but we could try.

We should give our patient a warm bath and put him to bed, mild doses of calomel to clear out the bowels and perfect rest and quiet should be enjoined. We have no known procedure for treating the damage to the cord and the treatment of the active stage should be based on general principles and must be symptomatic. There is one drug, however, that may do good and can do no harm. Urotropin given by the mouth will produce formaldehyde in the cerebrospinal fluid, and it seems to me that, if the infectious agent is in this fluid, it is a wise course to follow.

In the treatment of the sequelae the use of mild massage as directed by Weir Mitchell, together with the use of the galvanic current slowly interrupted, commencing about two weeks from the beginning of the attack and after all pain has subsided, daily treatments of about five minutes duration with perhaps sixty interruptions to the minute, I am confident will benefit a large number of patients. This with voluntary and passive movements, especially of the weaker muscle groups, will favor muscle balance, increase nutrition and educate the centers. I believe, as a rule, deformities are preventable by passive motion and at times retention apparatus, but these sometimes will occur. It then becomes an orthopedic case, and should be treated by their mode of procedure, according to the condition as it is met with by them.

In closing, I wish to impress upon you that the greatest menace to rational treatment of these patients is the irregular healer. Each cult has a specific method, but the one which appeals to the populace most is always the most irrational and so it falls that the chiropractor is treating more of these cases than the regular physician.

As soon as the patient's family is informed that the disease is in the spine or spinal cord, instantly comes the idea of treating by some mechanical means. Thus early some patients are injured by too vigorous manipulation. Those who would recover anyway become advertisements of the skill of the healer, notwithstanding that neither he nor the family has any conception of the nature of the disease, nor will they appreciate the consequences until perhaps months have passed and the best time for rational methods, including orthopedic measures, has passed.

Discussion.

Dr. L. W. Snow, Salt Lake City: We are all more or less familiar with the splendid work done by Dr. Lewis and others in the Rockefeller Institute, as reported from time to time in the Journal of the American Medical Association, and reviewed at great length in the issue just before the last which came to our hands. He has certainly shown that anterior poliomyelitis is an infectious disease. He has further shown that in an experimental way an immunity can be developed to anterior poliomyelitis, and holds out the hope that in the future there may be a serum developed that will produce immunity in other individuals. As an infectious disease it ought to justify isolation, and if in the future an epidemic should develop in this state, as it has done in neighboring states, the greatest precaution we can take will be one of isolation.

Dr. S. L. Richards, Salt Lake City: I have been unfortunate in having three cases of this kind. There was one symptom I have not heard mentioned nor stress laid upon it, which appeared in these three cases, the great depression which was out of all proportion to any other symptoms. The last case was a recent one which I watched for two or three days, in whom this marked depression was evident. It was the only symptom that seemed to me out of proportion to the physical condition.

Dr. S. C. Baldwin, Salt Lake City: One speaker said anterior poliomyelitis usually appears in children one to four years of age,. I believe it is seen in more cases past that age than under it, and a good many cases have been diagnosed even in adults. I saw a case recently of a man about thirty years old, the cause of whose trouble had been diagnosed as anterior poliomyelitis. That it has been quite prevalent in this state there is no ques- because there has not been the attention paid to it that is being paid today in the surrounding states. Case after case comes in nowadays showing the results of infantile paralysis which had not been diagnosed at the time of the disease.

R. L. Gillespie, in closing: The orthopedic surgeons object to any treatment in these cases in the early stages and some put them in a plaster splint, simply to create muscle balance and give the parts absolute rest, thus preventing deformities as a result of muscle imbalance. I am optimistic relative to the future of this disease which I believe lies along the lines worked out by such men as Simon Flexner. I think the diagnosis may be made by some serum reaction and that a remedy will be discovered in the form of a serum or a vaccine, as they are working on now. I look forward in the next few years to advanced ideas relative to this disease, so that we will not look upon it as such a mysterious and serious condition.

INFANTILE PARALYSIS.*

By Chas. F. Eikenbary, M. D.
SPOKANE, WASH.

There is no medical subject that has occupied more of the attention of the profession during the past four years than that of infantile paralysis. The medical journals have been full of the accounts of epidemics that have harassed various parts of the world, particularly certain portions of Sweden and many localities in our own country. The lay magazines, likewise, have contained many accounts of the disease, some of the articles having real merit, many of them of the sensational type, and some of them undoubtedly meant to advertise various parasites who, in the garb of men, conceal their wolfish features, and prey upon the credulity of the trusting parents of poor little crippled children. The quack is ever an undesirable citizen but, to my mind, the one who preys off crippled children is going somewhat beyond the limits of degeneracy.

Since about 1840, infantile paralysis has been recognized as a separate disease, and during this time many epidemics have been reported, most of them, up to the past few years, being rather limited. The pathology, almost up to the present time, has been poorly understood and the treatment has been more or less aimless. Within the past four or five years such appalling epidemics have swept over various localities that the disease has been thoroughly studied, not only by the rank and file of physicians, but by many of our great laboratory workers as well. The result is that our conception of the disease has very largely changed, and the literature on the subject has had to be rewritten. Most of the literature that is over five years old is now practically worthless.

In the 1901 edition, Osler speaks of the disease as being entirely confined to the motor system, the process involving only the anterior horns of gray matter, and the infectious nature of the disease is not even hinted at. In the same book he defines the disease as an affection occurring most commonly in the first three years of life, characterized by fever, loss of power in certain muscles, and rapid atrophy. Such a definition could no longer stand. The infectious nature of the disease, as well as the contagiousness, has been so thoroughly demonstrated that no one could reasonably dispute it.

During the years 1905 and 1906 there occurred an epidemic in Sweden in which several hundred children were affected, and in 1907, in New York City and vicinity, there were over two thousand cases. We next hear of outbreaks in the neighborhood of Chicago, a little later in Minnesota, and this past year more or less serious epidemics in Nebraska and Idaho, as well as in both the eastern and western parts of Washington. It does not take any great stretch of the imagination to trace a connection in these epidemics. A large portion of the immigrants from Sweden eventually locate in the northern part of the United States—Minnesota, Nebraska, Dakota, and so on west through Idaho and Washington. All of them come in through the port of New York, the city that had such a terrible epidemic, following somewhat closely upon the epidemic in Sweden.

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*Read before the Whitman County Medical Society, Garfield, Wash., Jan. 16, 1911.

Wickham, of Sweden, as well as many observers in our own country, was able to trace the contagion from village to village, from house to house, and from family to family, and was able to show that the contagion can be carried by a third person who may remain exempt. The report of Dr. Anderson, in the September Bulletin of the Illinois Board of Health, is so timely and so well illustrates what I have just said, that I am going to beg your indulgence while I read a portion of it. This shows better than any other report I know of the contagious nature of the disease.

My own experience with the acute stage of the trouble is naturally more or less limited, as the orthopedist usually gets these cases after the paralysis has resulted in deformity. And yet the following reports give additional proof. Last July I was called in council on two cases of infantile paralysis occurring in the same family. In the same block, about the same time, there were two other cases in children living in a house directly back of the one first mentioned, and the children played together. In October, 1909, I saw two cases in Spokane, both occurring in the same family, one case dying of respiratory paralysis on the third day, the other coming down within twelve days and showing practically the same symptoms as the first, only milder in character, the paralysis being transient and disappearing completely within a few days. About two months ago, I saw a case in the acute stage, the muscles from the hips down being completely paralyzed. Within a week a second child in the same family exhibited nearly the same symptoms as the first, with the exception of the paralysis. Eliminative treatment was given, and the case cleared up very quickly. Perhaps it never would have come on to the stage of paralysis. Possibly it was not one of infantile paralysis at all, but the similarity of the symptoms certainly justified the diagnosis and the treatment.

Before leaving this phase of the subject I wish to refer to the work of Simon Flexner, of the Rockefeller Institute. This is by far the most important that has ever been done along this line, and has gone a long ways toward clearing up the pathology, and has definitely proven the infectious nature of the disease. His work was done almost entirely on monkeys. His experiments and investigations show that the term anterior poliomyelitis is absolutely a misnomer. While it is true that in the majority of cases the force of the disease is chiefly spent on the anterior horns of gray matter, yet there is no part of the entire nervous system that is exempt. It may effect the entire cord, including the membranes, or it may effect not only the gray matter of the brain, but the entire brain substance as well. So, instead of an anterior poliomyelitis, we really are dealing with a meningo-encephalomyelitis.

Let us get this fact well into our heads, when it will be easier to understand why we have such a varied symptomology, why in come cases death will occur so quickly, and why some patients exibit as much pain as would a case of multiple neuritis, and why other cases will so closely resemble the ascending paralysis of Landry. As a matter of fact, it is a question whether Landry's paralysis, multiple neuritis, and infantile paralysis are not in reality one and the same disease.

During the year 1909 Flexner obtained the spinal cords from two children who had died of infantile paralysis and with these two specimens as a beginning he has been able to transmit the disease to monkeys, and from one monkey to another, on up to the present time. As he says, apparently the disease can be transmitted indefinitely. So far as we know, there is no disease that can be transmitted indefinitely that is not due to a living organism and, therefore, we must assume that infantile paralysis is due to such a virus. Unfortunately, he has not yet been able to identify the germ under a microscope. It has been found that it belongs to the class of the so-called filtrate viruses, the organisms being so small that they cannot be caught in a Chamberland filter, which, I understand is the closest filter known. Flexner was also able to show that freezing had no effect upon the strength of the virus, it remaining active after being frozen six weeks. Also, after being dried for many days, over caustic potash, it was as active as ever.

The mode of entrance of the germ has not been definitely proven, although the evidence in favor of the naso-pharynx route is very strong. As Flexner points out, it is quite likely that the mode of entrance is the same as that of epidemic cerebrospinal meningitis, and it is more than likely that both can be carried by an intermediate host.

More than ever before we realize that a gloomy prognosis need not necessarily be made. It frequently happens that where there is paralysis of many muscles, fairly complete recovery takes place. Of course, this is not the rule. But even where paralysis is more or less extensive and recovery does not take place, it is a great mistake to say that the case is hopeless and that the child will necessarily be badly crippled for life. Surgery in the past has done a great deal for patients crippled with infantile paralysis; it is doing more now than ever before, and the future for this line of surgery is exceedingly bright.

Unfortunately, we have not at the present time any specific for the acute stage. I confidently look forward to the bringing out of a specific in the near future, one that will be at least as certain as is the serum used in connection with spinal meningitis. When such a serum does come, we shall have to improve our methods of diagnosis so that the nature of the trouble can be determined before the onset of paralysis, for we certainly can expect precious little from any serum used after paralysis is present.

Realizing, as we now do, that infantile paralysis is an infectious and contagious disease, every case should be quarantined. While quarantine may work a hardship in some cases, yet the hardship, the expense and inconvenience are not to be thought of for a single minute, if one single child can be saved from a life-time of paralysis. At the present time the treatment of the acute stage is that of any acute disease—elimination and rest. Complete rest in bed for several weeks should be insisted on. By so doing we may avoid any extension of the trouble, and that part of the paralysis which is due to congestion, crowding of the nerve cells, rather than to an actual destruction, may entirely disappear.

Some writers have advocated ice packs along the spine, but I cannot see how this procedure can be of any great benefit. Considering that the cord is located nearly in the center of the body, it would seem that ice applied to the back could hardly be expected to have any effect on the spine.

It is most important that, from the time paralysis sets in, the limbs should be supported so that the paralyzed muscle is not put on the stretch. This can be done by any one of various applications, such for instance as a sand bag, a firm pillow or a very light brace. It is important that a firm mattress should be used, so that the spine and limbs do not sag. In case of complete paralysis I prefer to have the child placed on a gas pipe frame. This is about the width of the child's body, and about six inches longer than the child. It is made of light gas pipe and covered with canvas. It is padded as needed and slightly bent, so that the spine is put in slight extension. Anyone with a very slight amount of mechanical ability and a few tools can readily construct such a frame.

The treatment of the stage following the paralysis,—that is, for the first year or year and a half following the paralysis, is exceedingly important and this is the stage that is usually neglected. Most cases of infantile paralysis that come into the hands of the orthopedic surgeon come for the relief of deformity, something that should never have been allowed to occur. We know, just as soon as we have a paralysis of certain muscles, deformity is going to occur unless we do something to prevent it. We need never speculate as to whether or not nature will step in and prevent deformity. We have a strong muscle pulling against a weak one, and it does not take a mechanic to tell that the foot, for instance, is going to be pulled into a deformed position by the action of the strong muscle. If the anterior tibial muscles are paralyzed, the foot has no alternative but to take a position of equinus. By applying a light brace, the foot can be held in the correct position until such time as no more improvement in the degree of paralysis can be reasonably expected, when it is a comparatively easy matter to do a tendon or muscle transference, thus restoring the muscular balance.

At the onset of paralysis, indeed for many months afterwards, we cannot tell how much recovery is going to take place, if Nature is only given a chance. If we allow a strong muscle to continuously pull against a weak one, the latter is certain to lose all its tone, even though the centers in the cord, supplying this weak muscle, are not destroyed. In other words, if we allow this condition of constant stretching to continue, the muscle might as well have been entirely paralyzed from the beginning, for the result is the same. It frequently happens that muscles which, in the beginning are totally paralyzed, will, by being properly supported, entirely regain their tone. It seems to me a most foolish thing to expect a muscle to regain tone, merely by passing a current of electricity through it for a few minutes daily, or by massaging it for a half hour daily, allowing it to go unsupported for the rest of the twenty-four hours. I am sure, if I had an apple tree that was crooked, I would not prop it for a half hour daily, and then expect Nature to hold off her forces for the balance of the day. I do not wish to condemn massages for these cases but I do contend that, to be used alone, it is just about the same as doing nothing.

I would say the same as to electricity. Possibly there may be some virtue in its use, provided we adopt other measures to hold the limb in the correct position. I have yet to see a result that I would be inclined to attribute to the use of electricity. We sometimes forget that the nature of this disease is to improve for many months, sometimes as long as two years, whether we do anything or not. Support your patients first, and then use electricity for it will certainly do no harm, and use massage, for it will probably do a great deal of good.

The question of the treatment of deformity is a large one, and would require so long a paper that I shall make no attempt to go into all its details. Within recent years nerve grafting has been talked of a great deal, but up to the present time the results have not been good enough to justify the claims that were made for it in the beginning. Possibly in time, with improved technic, the results will be better. At present the transplantation of muscles and tendons offers more for this class of sufferers than does most anything else. The results are most pleasing. For instance, if a strong tibialis anticus is causing the foot to be pulled over into varus, the muscular balance can be restored by transferring a part of the common extensor to the outer side of the foot, or the extensor hallucis can be transplanted in the same way.

There is almost no limit to the variety of deformities that can occur as a result of this form of paralysis and, likewise, there is almost no limit to the variety of surgical procedures that can be used to overcome the deformity. To go into details of all of them would take too much of your time. There are a few points in the technic of tendon transference that I would like to emphasize. Never attempt to transplant a sound muscle or tendon into a paralyzed one. The paralyzed one will stretch and the result consequently be lost. In anchoring your tendon, sew the tendon into the periosteum or better still into the bone. Take up enough slack in the part you are transplanting to hold the foot in the corrected position without artificial aid, although, of course, a cast will have to be worn for a long time following the operation. It is important that, in so far as possible, the tendon be made to pull in a straight line.

Some cases will need not only a tendon transference but an arthrodesis as well. For instance, in a case of calcaneo-valgus, most excellent results can be accomplished by removing the astragalus, removing the articular surface from the end of the tibia, pushing the foot as far backwards as possible, and transplanting the perineal tendons back into the insertion of the Achilles. Tendons not long enough to reach to the desired point may be lengthened by means of several strands of braided silk. The silk forms a tenter, around which new tendon will form. For all practical purposes this tendon is about as good as the original. In much the same way several strands of braided silk can be substituted for overstretched ligaments. If the proper technic be carried out, these ligaments never give any trouble and give just about as much support as the original ligament.

In conclusion, I want to impress upon you the necessity of doing *something* for this unfortunate class of patients. If you do not, someone else will, and that someone is very likely to be an osteopath, a so-called chiropracter or some other irregular, who will probably make a pretense of doing something, succeed in getting all the money in sight, and give nothing in return. And a couple years later the patient comes under the care of the orthopedic surgeon, showing marked deformity, that could have been prevented. Even though we may not think that electricity, massages, the use of a therapeutic light or a hot air oven will do any good, still we are justified in using any or all of them if, by so doing, we can control the patient, can prevent deformity, and keep the patient satisfied until such time as some operative procedure is indicated.

THE SURGICAL TREATMENT OF INFANTILE PARALYSIS.*

By Fred J. Fassett, M. D.
SEATTLE, WASH.

It is proposed in this paper to use the word surgical in its broad sense, incuding all the non-medicinal as well as the operative measures. The subject falls naturally into two parts, which we may call, first, the mechancial, and second, the operative treatment. The treatment may also be considered in two chronological stages, first, the period during which we may expect spontaneous recovery, and second, the period after this recovery has ceased.

Now it happens that these two schemes of classification merge into one, for the period of spontaneous recovery is essentially the field of mechanical treatment, and the period of permanent paralysis is in general, the time for operation.

Mechanical Treatment.

When should the regimen of mechanical treatment begin? I believe that simple, temporary splints to prevent toe-drop and knee flexions may be used to advantage as soon as the paralysis is discovered. They are no hardship to the child; they call for nothing but the most elementary surgical skill in their application, and they prevent at the beginning those fixed deformities that appear with such startling rapidity.

But in any case at the end of the first month the approximate extent of the original paralysis can be determined. At this time or earlier, a careful *functional muscular survey* should be made and the results committed to paper for future reference.

Such a survey might run like this: "All motions of neck, back, chest, trunk and left upper extremity, normal. In right upper extremity, all muscles acting except abductors of shoulder; arm cannot be raised from side except by muscles that move scapula on thorax; marked atrophy of deltoid; moderate atrophy of supra- and infra-spinatus. Right lower extremity: all motions of hip, normal. Flexion of knee, normal; extension of knee, present but weak; calf muscles, strong; peronei, strong; tibialis anticus, not acting. Left lower extremity: All motions of hip present but weak; extension of knee, absent; flexion of knee, very weak (sartorius only acting); no action of any muscles of foot except flexors of toes.

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*Read before King County Medical Society, Seattle, Wash., May 1, 1911.

With such a statement on record, we are in a position to draw some definite conclusions when after a month or year we wish to know what gain has really taken place. The simple fact that a child did not walk in September and does in January, does not show that power has returned to the extensors of the knee. It may be that the ligaments have so relaxed that the knee can be thrown into hyper-extension like a wooden leg, and that the apparent gain in function is but the beginning of further deformity.

We should have then, at the start, this exact account of stock. And one thing more. We should have always in mind that *the one constant symptom of poliomyelitis is a greater or smaller spontaneous recovery from the paralysis, doctor or no doctor, treatment or no treatment.* It is only with this fact in mind that we can judge with any accuracy of the true value attaching to any form of treatment.

Assuming, now, that the febrile period has passed, what agencies have we available and what will they accomplish? In the first place, they all combined will accomplish only this: *They will prevent deformity and they may increase the amount of recovery to a little greater sum than it would have reached unaided.*

The agencies available and most frequently employed are: (1) Heat; (2) Massage; (3) Exercises; (4) Electricity; (5) Apparatus.

Heat. A striking feature of the paralyzed extremity is its cold, blue surface. The application of heat, theoretically, ought to improve its circulation and metabolism, and in actual practice it is true that weak muscles act better and that some muscles, apparently dead, come to life temporarily when the extremity is thoroughly warmed. The means of applying the heat will vary from the simple hot bath or the open fire to the more elaborate baking machines, or the very convenient electrotherm.

Massage. Massaging means "rubbing in the right place." The chief technical knowledge needed for efficient massage in poliomyelitis is the location and extent of the muscle bellies that need the treatment most. To knead the calf where these muscles have already recovered all too well for the good of the foot, is a waste of time. To rub the skin all off the crest of the tibia is simply useless pain, but to faithfully massage the muscle substance of the weak tibialis anticus, the quadraceps or the deltoid may not restore power in these muscles, but it represents an intelligent effort in the right direction. In my experience ten minutes of this work done by the parents every morning and every night is more liable to be efficient than an hour's visit to a professional two or three times a week with the inevitable interruption.

Combined with massage, there is sometimes a demand for wisely directed passive motions calculated to stretch contracted muscles.

In the correction of the earlier and minor contractures, passive motions are quite efficient. Where the shortening is at all resistent, ten seconds of tenotomy with two or three weeks in plaster, will accomplish more than a year's manipulation.

Exercise and Exercises. This is a distinction with a difference. By "exercise" I understand such performances as walking and playing games, largely for the fun of it, without regard for the muscle or muscle group employed.

By "exercises" I mean definitely prescribed contractions of certain muscles or muscle groups which can be voluntarily controlled but which are still too weak to do their normal duty. For example, the extensor of the knee may be so weak that it can only wrinkle the skin about the patella. To ask that muscle to lift the whole weight of the foot would be as absurd as to ask a ten year old to begin exercising with 100 pound dumb bells. But the muscle that can wrinkle the skin should practise wrinkling the skin; later it will be able to slightly draw up the patella, and later it will be able to support a fraction of the weight of the foot while the hand of the parent takes the other fraction, and so on to its maximum capacity. Most parents in my experience will give time to this if properly supervised. Some parents can do it with a zest and variety that will make of it a pleasant game, which calls out the enthusiastic cooperation of the child.

Electricity. If it be wise to train the muscles by this detailed exercise, it is certainly logical to think of the artificial contractions produced by electrical stimulation, as a means of keeping up that exercise until the nerves recover. While I subscribe to this doctrine on paper, I find its applicability very limited in practice. To be of use electrical stimulation must be skillfully applied. This means frequent visits to the office over a period of six months or a year. To enter on less of a program is folly; to enter on so much of a program calls for a degree of assurance which I am no longer able to supply. In other words, I do not believe that electricity adds enough to the total spontaneous recovery to compensate for the trouble and expense.

Apparatus. The purpose of apparatus is three fold: (1) To prevent deformity; (2) To support the weak muscles; and (3) To favor walking.

(1) As has been suggested, the greater part of recovery of muscle power in any particular case would

take place, treatment or no treatment. We are, therefore, little responsible for what muscles are acting a year from the time of onset. But if at the end of a year there are fixed deformities, as toe-drop or flexion of the knee, it means that some one has been negligent. If the calf muscles are allowed to shorten so that the child must walk on the toes, it means that some one has failed to support those toes.

(2) The support of weak muscles belongs in our list of things calculated to increase the spontaneous recovery of muscle power. In every paralysis there are two elements, the condition of the nerve and the condition of the muscle. Over the recovery of the nerve we have but little control, but all our physical measures have this as their aim, that when the nerve recovers it shall find the best possible muscle with which to demonstrate its recovery. Now a muscle that is simply idle for six months or a year suffers little harm. If, in addition to this idleness, the muscle be stretched all this time to its greatest possible length, its chance of recovery is distinctly worse. So it comes about that sometimes the nerve recovers and finds the muscle has been so stretched that it cannot respond to its normal stimulation. When such a muscle is supported in a position to allow full contraction, it sometimes comes to life in a way that is very surprising. Simply supporting the muscle will not restore power if the nerve be not destined to recover, but *no muscle has had a fair chance to show what it can do until it has had a long trial of this supportive treatment.*

(3) Apparatus favors standing and walking. That paralysis is indeed a bad one where a carefully designed apparatus will not permit walking. The only cases in my experience where I hesitate to apply braces in the hope of getting the child to walk, are those rare ones in which the muscles about the hip are all so weak that I fear accidental dislocation. Walking, if attainable, is a great pleasure to the child and the family, adds much to the general health and, best of all, keeps going into the legs those normal nerve impulses which are the best stimulants of growth and recovery.

Operative Treatment.

With one exception operations are best postponed until the final extent of the paralysis can be determined. This means till the end of the first year and a half or two years. In one case that had the full program of treatment outlined above, I have seen muscles recover in the first quarter of the second year that gave little promise three months before.

Tenotomy. The one exception is the operation of tenotomy to correct deformity. This can be and should be done as early as its necessity becomes apparent. The tendon most commonly divided is that of the calf muscle, but the tendons of any muscle of the leg or foot may be similarly treated if it maintains a fixed deformity.

Operation simply corrects deformity. Lengthening the heel cord favors but does not assure return of power in the muscles that lift the foot. If there be any power in the extensors of the foot, this power may be expected to increase when the overstretching incident to deformity is removed. This operation has been given a bad reputation by those surgeons who have regarded it as curative without proper after care.

Tendon Transplantation. This operation plans to so shift the force exerted by a muscle that this force will be of use rather than be wasted or be producing deformity. The essentials of success in this operation are proper selection of cases; proper study of the mechanism and absolute asepsis. To expect a muscle to act as both extensor and flexor, to expect one of the peronei to wholly replace the gastrocnemius invites disappointment. To allow even the slightest septic softening at the wound will usually cause sloughing of the sutures that hold the tendon in its new position. The field of muscle transfer has been greatly increased by the use of silk strands to extend the tendon to a firm and desirable anchorage.

Silk Ligaments. This principle can be carried further by the introduction of heavy silk strands, not from muscle to bone, but across the joint from periosteum to periosteum. In this operation the same great care is needed, but when properly planned and carefully executed, this procedure adds greatly to the stability of the joint.

Arthrodesis. When there are no muscles to transfer and where there is reason to think that silk would not hold, arthrodesis, that is, the complete abolishment of the joint is to be advised. This is our last resort. It gives a stiff and awkward extremity, but one that may be extremely serviceable. This operation should not be done on children less than twelve years old.

Nerve Grafting. In the transfer and grafting of nerves I have personally had no experience, but a few brilliant results have been reported. The consensus of opinion seems to be that while the great technical difficulties of this operation can now be overcome, the cases in which we will sacrifice one acting nerve in the hope of its regeneration in another trunk are not liable to be numerous.

The typical operation for the improvement of poliomyelitis consists in a combination of tenotomy, tendon transplantation, and the insertion of silk ligaments according to a plan carefully devised for that particular case. I have spoken of this operative treatment as being done after a year or more of the physical treatment, but the operation is not the end. As soon as the wounds are healed, the same old program should be renewed. The heating and massage will be particularly grateful if the limb has been in plaster. The exercises are absolutely essential in the after care of muscle transplantation, and the apparatus should be continued for weeks or years according to the muscles involved.

Does all this sound hopeless? It is, unless one is dealing with one's own family where nothing is hopeless, or has watched the steady gain in many cases so that he can "see the end from the beginning." Does it sound expensive? It is. It calls for the sort of perseverance and devotion that no money can buy. For this reason the function of the surgeon is simply that of supervision and incidental operation. The real work of the treatment falls of necessity upon the family.

Some physicians complain that parents with such children run from doctor to doctor and from quack to quack. Such, as a rule, has not been my experience. If the average parent does not carry out the program outlined above, it usually means that the physician has failed to present that program in its proper, far-seen perspective and has failed to contribute from time to time that sane but powerful enthusiasm which the parent has a right to demand of a physician.

A NOTE ON THE TREATMENT OF ACUTE POLIOMYELITIS.*

By John C. Schapps, M. D.,
BUTTE, MONT.
Formerly Orthopedic Surgeon to St. Mary's General Hospital and The Kings County Hospital, New York. Member of the American Orthopedic Association.

In accordance with the natural history of this formidable affection, when the febrile stage has passed, there is a rapid and continuous diminution of the paralysis. To those unfamiliar with the disease, it may seem the gratifying result of treatment and a recovery nearly or quite complete appears probable. The disturbance of normal balance between opposing groups of muscles causes then little or no anxiety. This is the stage of satisfaction.

After several months, it is gradually realized that the gain in muscular ability has become slower. In a year or less it has practically ceased and much room for improvement remains. Under the best of circumstances but one case out of ten makes a complete recovery, that is, a recovery without any paralysis at all. This is the stage of disappointment and reproach.

While the contention has been made that the permanent paralysis is dependent absolutely upon the extent and severity of the spinal lesion and cannot be affected by peripheral treatment, it is a well demonstrated fact that the constant stretching of weak muscles by their stronger antagonists causes permanent elongation and loss of contractility in the stretched muscles and structural shortening in the contracted muscles. And it is an established working principle in the orthopedics of these cases that both paralysis and contracture may be largely prevented by the early and continuous relaxation of the paralyzed muscles. It is important to bear this in mind, for poliomyelitis may be expected to occur at widely separated points during the warm weather.

The muscles of the leg are the most commonly affected. When the dorsal flexors are paralyzed and the extensors not, or when both groups are affected but the flexors more than the extensors so that the foot assumes a position of "toe drop", the foot should not be permitted to extend or hang down or to be pressed down by the bed clothes, but should be retained in a position of dorsal flexion. I am of the opinion that "toe drop" is by far the most common form of permanent disability resulting from poliomyelitis because of neglect of this precaution.

If, on the contrary, the flexors of the foot are the stronger and the patient shows a tendency to walk upon the heel and has little or no power at the ball of the foot, a position of extension of the foot upon the leg should be maintained. If the foot roll out, it should be kept in a rolled in position. If it roll in, the reverse position is indicated. Should the paralysis affect all the muscles of the leg so severely that no difference in tension can be made out between opposing groups, the foot should still not be left to gravity and accidental pressure, but should be kept at right angles with the leg and subsequent contracture watched for and dealt with.

Paralysis of the extensors of the knee is common and may be made permanent by the traction of the hamstring muscles. The limb should be put with the knee straight. I do not recall having seen a case of poliomyelitis in which the flexors of the knee were more paralyzed than the extensors, which tends to prove that flexion, the habitual position of rest, weakens the extensors by stretching them and favors the flexors by relaxing them.

It will be found that highly gratifying results are obtained by relaxing the weak and stretching the stronger muscles when it is done early in the case. Even when the remedy is applied quite late the improvement is often marked. Not only should the weak muscles be kept in a state of relaxation when at rest, but they should be slackened when massaged. Massage should not be used indiscriminately, for this tends to increase the strength of the already predominating muscles and to aggravate the state of unbalance. It should be applied to the muscles needing it most. Exercise of these muscles should be at first assisted, later resisted.

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*Read before the Montana State Medical Association, Butte, Mont., 1911.

Attempts to relax paralyzed or weak muscles may be interfered with by painful resistance of their opponents. It should be dealt with gently and can be usually gradually overcome. Active treatment, such as massage or exercise of muscles in a state of painful spasm, is distinctly contraindicated. Where there is much tenderness and muscular rigidity, complete rest of the limb by a fixed dressing is comfortable and helps relaxation. A succession of plaster of Paris splints will be found satisfactory. A gain in position can be made each time the dressing is changed.

Plaster of Paris is probably the most generally available material for retention or correction. It may be made removable so as to permit the employment of other measures, such as electricity, exercise and massage should they be deemed advisable. But early in the case, muscular relaxation is so much more important than any or all other measures that, should the choice have to be made between an irremovable corrective dressing and a free limb, the corrective dressing would be by far the better. With a little trouble, however, simple removable retention splints may be made of tin or similar material.

CESAREAN SECTION—ITS PRESENT INDICATIONS.*

By G. R. Kunz, M. D.
TACOMA, WASH.

Cesarean section may be performed in the interests of the mother or of the child when safe delivery by forceps or by version is impossible. The indications are generally classed as absolute and relative; absolute when it is impossible to deliver a normal, viable fetus, or mutilated fetus, if dead, through the natural passages; relative when there is a question as to the possibility of the delivery in the best interests of the mother and child. Most frequently the operation is indicated in some form of abnormality of the pelvis, viz: generally contracted, flat nonrhachitic, rhachitic, osteomalacic, or exostoses.

Williams[1] states, deducting from statistics of Crossen, Reynolds, and himself, that it would appear that from 7 to 8 per cent. of the white women of our country have contracted pelves. In my service under Crossen we met with a number of such cases. Crossen's statistics give 8 per cent.

In all cases of pregnancy careful pelvimetry should be practised. A conjugata vera of less than 7 cm. in flat, and 7.5 cm. in generally contracted pelves is an indication for Cesarean section. However, any degree of pelvic contraction is only relative and a pelvis is judged to be large or small according as to whether or not it will allow of the passage of the head. Therefore, determine as nearly as possible the size of the child's head and compare that with the size of the parturient canal.

A number of methods for measuring the child's head in utero have been given us. None of them are entirely satisfactory. However, they should be considered of great importance in assisting us in arriving at a proper conclusion in breech presentation, where a cephalic version cannot be done.

McDonald[2], modifying methods practised by Budin and Perret[3], Stone[4], and others, uses a pelvimeter with adhesive strips attached to each tip to enable the fingers to be properly held to the instrument blades while making the measurement. The occipitofrontal diameter is obtained, and the biparietal, which is essentially the important one as it is the engaging diameter, is estimated by deducting, in the average case, 2.33 cm. He gave his series of 100 cases measured and states that in them and in others he has measured, he has never seen a child successfully delivered when the biparietal diameter was greater than the true conjugate.

The relative size in head presentations is determined by Miller's or Pinard's method, or Munro-Kerr's[5] modification of those two methods. It is best to anesthetize the patient. The head is grasped between the brow and occiput and firm pressure made downward in the axis of the superior strait, while two fingers introduced within the vagina regulate the downward pressure and the thumb of the same hand feels along the pubic brim and estimates the amount of overlapping. Spontaneous delivery may be predicted if the head can be made to enter the pelvis. However, even if that cannot be done, a spontaneous delivery might take place, as we cannot foretell the extent to which moulding will take place during the labor.

The writer had a case of generally contracted pelvis, before coming here, in which the disproportion between the child's head and the pelvic inlet was very apparent. A history was given of having lost two children previously at term by craniotomy. Such a history practically decides our course. Cesarean section was done after labor had begun, and the patient delivered of a healthy child. Convalescence was uneventful.

Another case of abnormal pelvis was that of a woman about thirty-six years of age, brought to me last winter from Wilkeson, a distance of thirty miles, by Dr. Penny. She had been in labor for over twenty-four hours. She gave a history of having had four full term pregnancies, in each of which it had been impossible to deliver her with high forceps and craniotomy was done in each instance to save the mother. Upon examination I found the cervix completely dilated and the head capable of being freely moved about above the brim of a large roomy pelvis, but prevented from engaging in the superior strait by an exostosis about the size of a hen's egg, standing on end at the sacral promontory and projecting into the superior strait. At the time, as the dangers of sepsis would be great, owing to the repeated examinations that had been made, in spite of the great care of the attending physician in environments not very cleanly, the long journey the patient had had, and the length of time (24 hours) she had been in labor, I hesitated to do Cesarean section. For religious reasons and the rules of the hospital, a craniotomy on the fetus would not be countenanced. I, therefore, believing it to be in the best interests of the mother, applied high axis traction forceps and we endeavored in every way to deliver her, but without success. After an hour's rest, the fetus still being quite viable and the mother's condition fair, I did Cesarean section, assisted by Dr. Penny. The mother made a good recovery as regards the operation, but developed a phlebitis involving the veins of left leg and which persisted for about six weeks.. The baby had a one-sided paralysis, owing to the pressure of a large hematoma over the left side of head where it had come in contact with the bony prominence in the mother's pelvis. The hematoma was aspirated, the hemiplegia disappeared, and the child showed no further sign of abnormality.

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*Read before Pierce County Medical Society, Tacoma, Wash., Nov. 1, 1910.

Other positive indications for Cesarean section are cancer of the cervix, irreducible or persistent transverse presentations, incarcerated tumors within the parturient canal, such as large fibroids of cervical neck, ovarian cysts which cannot be dislodged or the contents of which cannot be aspirated at time of labor, etc.

As an example of the latter, I will mention a case which was sent to the Female Hospital, in St. Louis, by Dr. Schwartz, while I was assistant superintendent in that institution. She was a colored woman who had previous to that time borne six healthy children without any trouble. General health good, no evidence of rhachits, nor of syphilis. Examination of abdomen showed fetal head down, but high and prominent with no tendency to settle, back anterior and slightly to right. Auscultation: fetal pulse heard in lower portion of right upper quadrant. Placental murmur in lower median line and extending to right lower quadrant. External pelvic measurements were normal. The diagonal conjugate could not be determined on account of the presence of a large tumor which was even in shape, semisolid in consistency and almost completely filled the pelvic cavity, the greater bulk of it being in the right side. The cervix and its os externum, dilated to the size of a quarter of a dollar, could be made out only with the greatest difficulty high up and slightly to the left, pressed against the upper portion of the pubic arch. The mass obstructing labor was diagnosed as an ovarian cyst probably of the right ovary. It was firmly impacted and could not be pushed out of the way. The normal period of gestation having been passed, it was decided to operate upon her, with the hope that the contents of the cyst might be withdrawn and labor allowed to proceed naturally. A large sized trochar was introduced at the most prominent point but it was only possible, after firm and deep pressure from above, to squeeze out a small amount of a thick mucous substance.

Being convinced that the only hope for the mother and child was in performing Cesarean section, that was then done. Through an incision in the median line the uterus was raised out of the abdominal cavity. A rubber bandage was then placed loosely about the uterine neck to be used to check the hemorrhage following the incision into the uterus, if that could not be controlled by the hands of an assistant. The latter was instructed to compress the uterine arteries low down in the cervical neck between his thumb and first finger of each hand. The incision was then made into the uterus in the median line, cutting directly through the placenta which was in the way. The hemorrhage at this point was very profuse and recourse was had to the use of the rubber bandage, which seemed to check the hemorrhage better than the hands. The child was extracted, then the placenta peeled from its attachment, and the uterus immediately began to contract. The cervical canal was dilated with the hand in utero and several small strips of iodoform gauze placed in the uterus and their ends passed through the cervix into the vagina, these to stimulate uterine contraction and to afford drainage. Uterine incision closed by large buried silk sutures.

Next, tumor was elevated out of pelvic cavity. It was attached to the broad ligament by a broad pedicle. This was easily tied off and removed. The growth was a degenerating multilocular colloid cyst. It contained 12 to 15 distinct cysts filled with a thick colloid material. Many of them were of a reddish color due to admixture of their contents with blood. Particularly peculiar to note was one of the dermoid variety. It contained several hairs curled upon themselves and attached to a small piece of rudimentary skin. Its cavity was filled with about an ounce of the cheesy material peculiar to such cysts. The mother and babe made a good and uneventful recovery.

The relative indications for Cesarean section have, at this day, expanded to such an extent as to include placenta previa, eclapmsia, postoperative adhesions of the uterus to the abdominal wall, cases of previous Cesarean section, extreme obesity, vesicovaginal fistula, extensive varicosities of the labia, dense and unyielding cicatricial stenosis of the cervix, highly debilitated women who have exhausting constitutional diseases and, as advocated by Reynolds[6], even the neurasthenic women with little nervous endurance or capacity of bearing pain, with poor muscular power, weak heart muscle, and small lung capacity and with ill-trained and deficient eliminative system, etc.

"In the interest of the fetus" is frequently given as justifying Cesarean section, in prolapse of the cord, premature separation of placenta, repeated deaths of fetus in utero near full term as given by Plispanen[16], etc.

It is incumbent upon every physician to make a careful examination of his pregnant cases before labor to ascertain as to whether any difficulty in delivery may be encountered. If there be any doubt, send the case to a properly equipped hospital before labor begins. Each and every case is a case unto itself. No one is justified in subjecting a patient to Cesarean section unless all the circumstances of the case are carefully weighed and the future health and condition of the patient are taken into consideration.

The operation is not a difficult one to perform but no one, excepting him who has had considerable experience in surgery, should attempt it and only in cases of extreme urgency should it ever be done outside of a regularly equipped hospital. The best time to operate is at full term, at the beginning of labor, and before the pains are allowed to weaken the patient. Do not make repeated vaginal examinations. They are not necessary and as they are inducive to sepsis, are dangerous. The mortality in favorable cases operated upon just before or at the beginning of labor in a hospital is less than 2 per cent. in the case of the mother, and less than 1 per cent. in the case of the child. The longer a case has been in labor and, as a rule, the oftener she has been examined, the less favorable are the results of operation.

Reynolds[6] reports 289 collected operations by 20 different operators for mechanical reasons, not placenta previa nor eclampsia. In 82 cases before labor there was one death, making the mortality 1.2 per cent. That death was due to catgut sutures which became untied subsequently by the alternate contraction and relaxation of the uterus, during the absence of the surgeon, and death resulted from hemorrhage. Of 158 cases early in labor, 6 deaths resulted, a mortality of 3.8 per cent. Of 49 cases late in labor, 6 deaths resulted, a mortality of 12 per cent.

Davis[7] reports 41 cases in which the mother and child were in good condition before operation. The maternal mortality was 1 or 2 per cent; fetal mortality 0.

Frank[8] reported 13 cases. All had been examined manually with little regard to asepsis before entering the maternity. Results of operation excellent. He regards febrile conditions as no contraindication to Cesarean section. The child is saved, fatal septic peritonitis is avoided and better conditions are afforded for combatting the uterine infection than by any other technic.

Chas. Smith[9] presented statistics of 15,611 cases of labor which showed a fetal mortality, from induced labor of 39 per cent. high forceps 33 per cent., ordinary forceps 14 per cent., version 40 per cent., craniotomy 100 per cent. By these measures the unborn child is not given a fair chance and as Miles Porter[10] well says, "heretofore too little attention has been paid to the morbidity of both mother and child. The question is not only one of motherless children and childless mothers, but of invalid mothers and idiotic children as well. It should be recalled that the children who recover from cerebral hemorrhage invariably suffer permanent disability and in 30 per cent. epilepsy develops." Summarizing the report of 126 elective Cesarean sections, the maternal mortality he found to be 1.58 per cent., the fetal mortality 0, the maternal morbidity 12.69 per cent., the fetal morbidity 0. It should not be forgotten that the fetal morbidity following forceps, etc., is often worse than death.

In debilitated patients the delivery by abdominal section, especially if elective, compares favorably with other methods of delivery. Really difficult high forceps or version are more severe operations than the primary Cesarean section. If, in elderly primiparae, the mechanical obstacle leaves the result of labor in doubt, Cesarean section will usually be the safer. The difficulties and dangers which attend the use of the intrapelvic operation in these cases are impossible to estimate in advance, as is the amount of damage which will be done the soft parts.

During the last few years and up to today, there has been much discussion, both pro and con, by obstetricians and surgeons throughout the world regarding the indications for Cesarean section in placenta previa and in eclampsia. It is generally conceded that, under ordinary obstetric management, the maternal mortality in placenta previa is about 36 per cent., while that of the children is about 66 per cent., and about one-half of those born alive die within ten days.

In a recent article entitled, "Present Status of Management of Placenta Previa," Gussakow, of Berlin, gives a much lower death rate than the above. He collected 137 cases. In them the total maternal mortality was but 6 per cent. in total placenta previa and 1.7 per cent. in partial. Fifty per cent. of the deaths were due to air embolism, 12.5 per cent. to infection, and only 37.5 per cent. to anemia. Even in the face of such excellent results, he concludes that Cesarean section is justified in case the mother wishes a living child at any price.

Fry[12] states that the purely obstetric management will meet the indications of 95 per cent. of the cases of placenta previa.

Henkel[13], Berlin, concludes, after a recent series of 25 cases of placenta previa, that abdominal section is indicated in the central implantation whether the fetus at term be living or not. Theoretically Cesarean section should greatly lessen the death rate, but many of these children are immature and feeble and the statistics of premature children are not such as to warrant a lower death rate.

Gustavus P. Held[14], as a result of his own experience, states that he has become a firm advocate of Cesarean section in certain cases of placenta previa. In placenta previa centralis, in any period of pregnancy, after viability of child, if conditions are right for abdominal operation, section is chosen. Near term the indication is strongest. In partial placenta previa, with a large viable child under good external conditions, Cesarean section is again chosen. For the general practitioner, however, Braxton Hick's version and leaving the case to nature is the best treatment. Other methods are for the specialist.

Ross McPherson[15] says, in certain cases of placenta previa of central implantation, in the presence of a firm undilated os, where the parts are firm and unyielding, less damage will be done to the mother, and we shall be more certain of securing a living child by a timely Cesarean section than by resorting to the usual methods of delivery.

In cases of dangerous hemorrhage before the onset of labor, Cesarean section will probably find its broadest field of usefulness. In the presence of debility, with normal pelvis, rapid dilation with Boss's dilator is exceedingly dangerous, as patients are not well developed and cervix is inelastic and tears extensively.

Hugh Ehrenfest[16], in writing on the indications for Cesarean section last year stated: "It cannot be denied that in the case of an exsanguinated primigravid, with a profuse hemorrhage from a placenta previa which completely covers a slightly dilated rigid os, Cesarean section is a safe and promising method of treatment, both in the interest of the mother and the viable child, if the patient happens to be in a well equipped maternity hospital. Success in such or similar cases, however, does not permit us broadly to proclaim Cesarean section as the only proper treatment of placenta previa, as actually has been done."

Eclampsia occurs in about 1 per cent. of all pregnant women, with mortality in mothers about 25 per cent. and in the children about 50 per cent. If eclampsia is to be treated by rapid delivery, abdominal section can certainly compete with rapid dilation and extraction of the fetus. In eclampsia in the primipara near term with a viable child, Cesarean section is usually the best method of delivery. With capacious pelvis and vagina, Dührssen's operation may be preferred.

Polak[17] is rather against eclampsia per se as a relative indication, as such patients stand shock and sepsis badly and, therefore, are not good operative risks.

F. J. McCann[18], London, says: "The indications for Cesarean section in eclampsia are: First, when fits are severe and recur in rapid succession. Second, when labor has not commenced. Third, when the cervix is difficult to dilate from elongation, hypertrophy, or excessive rigidity. Fourth, when mother is moribund and fetus living and viable. Fifth, when labor has commenced and there is found considerable disproportion between the size of the child and that of the pelvis. Sixth, when surroundings of patient are suitable for a major surgical operation and when the services of an operator skilled in pelvic surgery can be obtained.

Manipulations in the efforts at dilation increase the fits and also further risks of infection, Cesarean section under modern conditions is practically free from risks, and is much preferred to the other methods of rapid delivery including vaginal Cesarean section. In properly selected cases it affords the best chances for saving the life of the mother and the child, although death of the fetus in utero is not infrequent on account of severe convulsions.

I believe that vaginal Cesarean section in multiparae with roomy pelvis in eclampsia is preferable to abdominal Cesarean section or rapid dilation.

Symphyseotomy has, practically, been given up and in its place pubiotomy is being done by a number of obstetricians, especially the Germans. As a substitute for Cesarean section, it is claimed that the pelvis is quickly opened with a small insignificant wound and the gain in pelvic diameter is permanent. But pubiotomy does not deliver the child and then must follow the delivery of the fetus through the pelvis and the vagina, with the added risks of unfavorable mechanicism and greater than ordinary danger of laceration and hemorrhage for the mother.

Henkel[18] believes maternal mortality is between 6 and 7 per cent.

Schlaflis's statistics of 700 pubiotomies give 4.37 per cent. maternal mortality and 9.18 per cent, fetal mortality.

Roth[19] reports 85 cases of pubiotomy in Leopold's clinic, in Dresden. The puerperium was febrile in 48 of the cases and in 20 the convalescence was serious; 6 children died, possibly in consequence of the operation, but none of the mothers. In 10 of the 40 cases examined later the women complained of pain on long standing, walking or lifting. In 21 of the 38 women examined there was a tendency to prolapse of vagina or uterus or both. In only six of the 20 cases, in which the women passed through another pregnancy after the pubiotomy, was the pelvis found to be permanently enlarged. The conclusions were that pubiotomy must be restricted to multiparae, to the aseptic cases, and to those free from general disease. Pelves with a true conjugate under 7 cm. should also be excluded from pubiotomy, as also all cases in which there is much disproportion between the size of the pelvis and the fetal head.

K. Reifferscheid[20] reports 36 of pubiotomy in the clinic at Baunn. All women recovered satisfactorily, left the clinic in good condition; all the children were saved. In most of these cases the sawed ends of the bone were freely movable and the women were able to walk and work as well as ever, the healing being always fibrous.

Williams[21], of Baltimore, reported 13 operations of pubiotomy. There were no maternal deaths, only one woman being seriously sick. All began to walk the end of the third week and were in good condition one week later. In one third of cases there was permanent mobility between the cut ends of the bone. This did not interfere with locomotion. Concluding he states: The operation is contraindicated when the true conjugate is 7 cm. or less and, consequently, does not enter into competition with Cesarean section. It is particularly applicable to the border line cases, as it affords as safe delivery after subjecting patient to the test of several hours in the second stage, whereas mortality of Cesarean section rises steadily with each hour elapsing after the onset of labor. If pubiotomy fulfills its present promise, it should entirely do away with the induction of premature labor in the treatment of contracted pelves. Complete statistics of maternal and fetal mortality are not sufficient. At present its results, in doubtful cases, are not equal to Cesarean section.

A number of cases of dystocia, due to Cesarean section, have been reported. Broadhead[22] tabulates and abstracts the reports of 20 cases in which rupture of the uterus had occurred through the Cesarean scar. He summarizes the results of his investigation as follows: Rupture of the uterus through Cesarean cicatrix is of rare occurrence. With prompt operative methods the mortality is comparatively low. When pregnancy follows Cesarean section, the patient may be safely delivered again by a section, in a large percentage of cases. If section is to be repeated and labor sets in prior to the time elected for operation, Cesarean section should be performed as soon as possible after the onset of labor pains. Sterilization may be done at the time of section, if the patient so desires. Suture of the laceration has proved successful but in some instances hysterectomy will be the method of choice.

Cragin[23] says that dystocia, following ventrofixation occurring six times in the experience of one man and so marked as to absolutely indicate Cesarean section, is sufficient evidence of the frequency of this sequel of the operation. During the child bearing age ventrofixation is not a safe operation for posterior displacement of the uterus.

Gellhorn[24] reports a case of dystocia following Cesarean section, owing to dense adhesions of the uterus to the abdominal wall. Delivery was effected by hydrostatic dilation of cervix, followed immediately by version and extraction.

Sinclair[25] reports 4 operations for Cesarean section on one woman. He favors the intentional production of adhesions between the uterus and abdominal parietes with a view of facilitating subsequent operations.

Mason and Williams[26], as result of experimental work and study of the literature of uterine scar after Cesarean section, reached the following conclusions:

(1) A carefully sutured and well-united scar will withstand any strain which can be endured by the uterine muscle.

(2) Rupture of a Cesarean scar is always secondary to unusual weakness of the scar, dependent on imperfect consolidation.

(3) The most frequent cause of imperfect consolidation is placing the deep stitches too far apart, or not including the entire thickness of the uterine muscle.

(4) Location of the incision and suture of the placental site probably do not affect the strength of the scar.

(5) Infection, in certain instances, plays a very important part in causing weakness of the cicatrix.

(6) Catgut as a suture material is open to objection that there is at least a possibility of the stitches becoming untied and that certainly more cases of rupture have occurred after its use than after the use of silk.

(7) As a corollary to the foregoing conclusions, it seems evident that, given a uterus which has been sutured with care to include the entire thickness of the muscular portion of the wall in each stitch, and to place the deep stitches close together throughout the entire length of the incision, using silk or linen and in which there has been no evidence of sepsis during the convalescence, such a uterus may be subjected with safety to distention by a full term pregnancy, or even, in the absence of mechanical indications for Cesarean section, to the strain of labor itself.

Again quoting Porter[10], with whom I agree: "We are warned by many writers that there is danger of having unnecessary Cesarean operations if we emphasize the lack of danger in favorable cases. This danger is a real one, perhaps, but that it is as great as that arising from the all too prevalent notion that high forceps, version and other obstetric operations require no particular skill, lacks proof.

"The point I wish to make here is that the so-called obstetric operations require for their proper conduct just as much skill as does Cesarean section. Indeed, I am of the opinion that the inherent difficulties of the obstetric operations are greater than are those of Cesarean section. All the operations under consideration require skill and judgment, and it is little short of criminal for one who is not possessed of both to undertake any one of them."

930 Pacific Ave.

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GASTRIC TETANY.*

By J. Chris. O'Day, M. D.,

PORTLAND, ORE.

In presenting this paper the writer wishes to add another case to what seems a scanty literature on the subject. The literature available certainly encourages the belief that but very few cases of real gastric tetany have been observed. I further gleaned that the opinion of several observers would have it that many of the cases reported as gastric tetany were not such, that is, not gastric tetany *per se,* but more likely a hysteria, intensified by the coexisting gastric derangement, whether pyloric narrowing or other.

If some of the cases reported as such, and by certain critics denied to be gastric tetany, were really not, the one about to be reported may also receive the ban of interrogation. But in all fairness it would require a tremendous argument to convince me my case was not one of gastric tetany, for there was a tetany and a most severe pyloric obstruction.

But, inasmuch as gastric tetany is rare and in view of the fact that pyloric narrowing is common in comparison, have we the right to associate the two? This question I could answer in either the affirmative or the negative for, in a careful examination of the literature, I find that many conservatives have been unable to draw conclusions which they themselves could accept. Personally, I am inclined to think not. I am strongly of the belief that factors other than the stenosis and dilatation have much to do with the precipitating of those uncanny seizures which make it necessary to keep the unhappy victim under constant vigilance.

While having made it clear to myself why the diagnosis of this disease should be obscure, I found no light had been given as to its etiology. All was theory, each plausible, too, but no one accepted. One was most admired, "auto-intoxication," whatever that may be.

As nearly as it has enabled me to determine, the following would represent the sum total of the various causes attributed. Later I will endeavor to show how they figured in the case under consideration.

To begin with, gastric tetany is usually associated with ectasia, complicated with hypersecretion. To Kussmaul is due the credit of first having observed convulsive attacks related to dilatation of the stomach. Then, after describing the character of the spasms and showing how they may and do involve the muscles of the arms or legs, body or face, even to the muscles of the larynx, in which case death shortly follows from asphyxia, he declares that "concentration of the blood, with withdrawal of water from the muscles and nerves, is the cause."

Later, Bouvert and Devic, in their conclusions, rested the cause of gastric tetany entirely with hypersecretion. Whether their belief was strengthened or not by having observed cases of gastric tetany associated with hypersecretion without pyloric obstruction, I was unable to find. My review of the literature inclines me to think they did not. Still I am forced to acknowledge a frequent association of hypersecretion with the so-called nervous dyspepsias and which, in the future, may lend or yield a definite clue. In support of his theory, Kussmaul sees a resemblance to the spasms occurring in Asiatic cholera, but to this Riegel agrees only to the similarity. He says, "It is not proved in cholera that the spasms are caused by desiccation of the tissues, for we see muscular spasm in cholera sicca, and here there is no desiccation of the tissues. Again, a number of cases of tetany have been observed in dilatation of the stomach, in which examination of the blood failed to reveal a reduction of the water."

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*Read before Portland City and County Medical Society, Portland, Ore., Oct. 19, 1910.

Another theory is that of reflex action, and the occurrence of tetany in connection with helminthiasis is offered as evidence, Riegel himself having observed such a case. Muller, in support of the same theory, reported a case where tetany was provoked by merely tapping over the stomach.

Later in their work, and in further support of their theory, Bouvert and Devic add pepto-toxins as a necessary factor to the hypersecretion. But the theory which seems to have appealed the strongest to observers in general is that of auto-intoxication. Seriously, then, the cause of gastric tetany is not known.

To my mind the cause would depend on a cycle of events, the absence of any one being sufficient to prevent its occurrence. One I would designate as the "master" event because it has figured in all the cases observed, so far as I have been able to determine. Without this gastric tetany, or tetany of gastric origin, could not be. It is a preexisting neurosis or neurotic disposition. Beyond this I know nothing of my hypothetical cycle. It savors of that same mystery with which we are surrounded when confronted by a sarcoma that has taken possession of a traumatized area. So, as but very few traumatisms result in sarcoma, and still fewer cases of tetany are found in association with the stomach disorders as mentioned, it would seem, for the present at least, we must content ourselves by attributing the cause to that meaningless term, diathesis.

In an experience of approximately two hundred cases of ectasia of the stomach, with and without hypersecretion and pyloric narrowing, but one was complicated with tetany. Yet in this may I consider myself fortunate for, as a matter of fact, clinicians of much greater experience, even to the extent of thousands of cases, have not been privileged to have observed a single case.

That all the sign symptoms and phenomena were not present in my case, as seems a requisite by some authorities, would not shake my faith in my diagnosis for the reason that the same may be said of most diseases. I will, however, endeavor to report the case accurately, leaving it to superiors to say whether or no I am right.

It was while a student of the illustrious John B. Murphy that I caught my first glimpse of the key to the labyrinth of clinical diagnosis, *the importance of the history*. Previously I have taken the liberty of referring to it as "Murphy's inevitable history." I mention it now merely to show what an infallible guide it was, leading, in this case, to conclusions which enabled me to cure what for two years had been regarded as an incurable epilepsy.

July of last year, Clyde N., thirty-six years of age, a bachelor, was brought to me by his brother, seeking relief from convulsions, of which he suffered one to three attacks per the twenty-four hours. The brother was able to give a clear history, having been with him throughout his entire illness.

At the time, two years had elapsed since the first appearance of the convulsions. At the beginning their occurrence was at erratic intervals, gradually growing regular and frequent, until finally no day is free from attacks. Proportionately his mentality grew sluggish. At the time of my first examination I convinced myself it had progressed to dementia, for some time had passed since the patient had been able to follow his usual occupation, that of insurance solicitor.

The family history presented one feature that may be of interest to those working in the field of drug inebriety. At the time the patient was begotten, the father was addicted to the habit of morphin, taking it primarily to relieve a chronic dysentery contracted while an officer in the civil war. The mother is of the highly cultured and intellectual type but inclines to nervousness. So far as diseases were concerned, the patient's early history is negative. Before considering the various causes of convulsions in adult life, syphilis was ruled out. No such infection had ever occurred. We then turned to the history of his dyspepsia. It was practically as follows: Seven years ago, while energetically engaged in the insurance business, he was seized with a severe attack of indigestion. When several days had passed without cessation of symptoms (pain), medical opinion gave it as "nervous"—a likely result of his continuous application to business.

A vacation in the mountains followed and, while removed from what had been believed the cause, his dyspepsia became more and more severe, till food, even in the smallest morsels, was capable of inducing pain. Vomiting usually followed, and when it did, relief would be immediate. Digital irritation to the pharnyx was often resorted to as a means of hurrying the relief.

This was really my first clue. Its interpretation demanded a serious consideration of gastric ulcer. Note what followed. Nearly one year a sufferer of gastralgia, then the pain gives way to periods of distress (bloating), then periods free from either pain or distress, then its gradual return, reaching a degree of greatest severity, and finally relief by the vomiting of enormous quantities of retained aliment.

This was the history of the five years following his term of painful dyspepsia or gastralgia. Emaciation was progressive, he grew more and more nervous, irritable, unreasonable, finally the explosion, the onset of the convulsions.

Here were two pictures it would seem hard to mistake, pyloric ulcer; its sequela, pyloric stenosis. If these conclusions were right, the convulsions were likely that of tetany, associated with ectasia of the stomach.

Examination of this viscus gave unmistakable evidence that these conclusions were undoubtedly correct. The degree of free hydrochloric acid was 90. Twenty-four hours after having administered the test dinner of Riegel, much of it could be regained by lavage. There was severe constipation with scybalous stools, but without any signs of blood or hematin. The urine was scanty, highly colored, specific gravity ranging from 1030 to 1035, no sugar, albumin nor indican present.

Another marked feature of the case, and one that might possibly be related to the urinary findings, was a dry, painful, crepitating synovitis of the knees, elbows and shoulders. The shoulder joints were much the worse, so much that circumduction or lifting the arm to a right angle with the body was impossible. Now here was dry tissue, at least so far as the synovial membranes of the affected joints were concerned, but could we regard it as a manifestation of Kussmaul's theory? So far the results would not permit such a view. Still it was quite suggestive.

It was during a time I was examining these affected joints I was given the opportunity of witnessing a seizure. Of a sudden he issued a groan and straightened in the chair. His brother, who at the time was present, remarked "That is the way they come on." Immediately was his breathing stertorous. The eyes assumed a wide-open stare and appeared glassy. A tic-convulsive of an exaggerated degree took possession of the left side of the face, spasmodically lifting the corresponding angle of the mouth. The teeth were heard to cringe. With arms extended, the fingers, wrists and forearms in the order mentioned became flexed and soon were drawn into the attitude described by Trousseau, *i. e.*, "thumbs adducted, palms hollow, position of an accoucheur's hand." Repeated examination of the tender joints convinced me that the happening was merely coincident.

Those objective symptoms enumerated by Boas as Trousseau's phenomenon, Erb's phenomenon, Chvostek's phenomenon were found wanting. We did, however, determine a hyperesthesia over that area of the face involved in the tic-convulsive.

According to Trousseau, three different degrees of gastric tetany are recognized; a mild type, in which only the muscles of the extremities are seized; a medium type, when also the trunk of the body, the abdomen and the face are involved; finally a grave type when the muscles of the larynx and tongue are implicated. The case under consideration I class with those of the medium type. Having thoroughly convinced myself that pyloric stenosis with dilatation of the stomach was present, I advised that the treatment be surgical. Inexperience compelled me to promise nothing relative to what might happen to the tetany. For its ownself, I argued, the stomach should be given drainage.

August 9, I operated upon the case at St. Vincent's Hospital. The operative findings confirmed our previous conclusions. The stomach was enormously dilated, its walls so thinned that no rugae were visible. Fully two inches of the pyloric end, including the pylorus and nearly the same length of the upper duodenum, were found bedded in a mass of dense adhesions, through which we were able to palpate heavy buttons and welts of scar.

Fearing the possibility of injuring the head of the pancreas should an attempt to separate the agglutinated parts be made, together with the weakened condition of my patient, dictated leaving of the mass alone, trusting to a posterior gastro-jejunostomy, no loop. In the anticipation and hope that the musculature of the greatly thinned stomach would contract and retract after drainage had been established, the openings were carried to a length of nearly four inches. Operative recovery uneventful, patient able to leave the hospital in two and a half weeks.

The stomach was now able to empty itself, his appetite became voracious, some argument being necessary to keep him from eating between meals. The stool lost its scybalous character with daily motions. Night after night the old vigilance was kept, but nothing of the tetany was seen till October 5. On this date a light, yet typical attack occurred. Up to this time improvement was steady, although no change had taken place in the arthritis or the high specific gravity of the urine. He had gained 24 pounds. His color now was more of a ruddy than sallow as before the operation. But why had the tetany returned? Why were the joints still dry and painful? Why was the urine unwilling to give up its high specific gravity? These questions forced us to again consider the theory of Kussmaul. Was it lack of water in the tissues?

Upon inquiry we learned the patient had little desire for liquids. Water, he assured me, was distressing. The liquids he was most fond of were the soups. We then decided upon a diet which included a liberal amount of water to be taken at stated intervals between the meals. For two days all went well. The night of the third day I was called hurriedly to his home, it being feared a seizure of the tetany was threatening.

Reaching the house, I found my patient trying hard to induce vomiting. His abdomen was greatly distended, but free from pain. Palpation gave the notion of a hot water bag filled not too full to prevent splashing. There was no tympany. The distention seemed due entirely to the presence of fluid within the intestinal tract. The stomach tube brought some away, but the rectal tube, inserted high, gave no relief. Most of the fluid remained within the small bowel where it splashed readily under the finger's thrust. A specimen of the urine voided at the time showed the high specific gravity unchanged.

Here it seemed I was confronted with an analogy of the old proverb, "You may lead a horse to water, but you cannot make him drink." It was an easy matter to instruct my patient as to the amount of fluids he was to drink, but there was some automatic machinery, the workings of which had no respect for what I was seeking to accomplish. Hence the question, "Why did the peristalsis of the small bowel become arrested so soon as liquids were in excess of a certain amount?" Could this be the explanation of Kussmaul's theory? Excess of fluids within the small intestine seemed to actually paralyze it, yet before increasing the amount of liquids to be taken, the bowel to all appearance had been working unerringly. The regimen was persisted in until frequent repetitions compelled us to give up the idea of it being coincident, and finally, when again the patient was allowed his own way, and fluids were ingested according to natural desire, no further abdominal distress ensued.

November 27 the stomach contents were examined. The degree of free hydrochloric was 65. Motility was good. There had been no further appearance of anything like tetany, and the question of uppermost importance was the unwillingness of the affected joints to give up the painful crepitus, and the urine to subside from its continuously high specific gravity.

Dr. W. S. Knox, who at the time was asked to see the case with me, suggested Murphy's proctoclysis. I must here acknowledge my indebtedness to the doctor, for but a few trials of the procedure were necessary to restore, and for the first time, normal relations between the urine and its specific gravity.

For illustration I will draw a homely comparison of the old pump which never "took hold" till primed. This remembrance was forced on me after the installation of the proctoclysis. Its practice was discontinued after the first week. Natural thirst demanded more liquids, the flow of urine proportionately increased, and since has maintained normal relations to its specific gravity. At the present writing, February 4, the elbows and knees are in very good condition, but no perceptible improvement has taken place in the shoulders. Although the general improvement has been so marked, we reasonably expect their recovery.

203-204 Medical Building.

THE SIGNIFICANCE OF GASTRIC HYPERSECRETION AND PYLORIC SPASM.

By Kenelm Winslow, M. D.,
SEATTLE, WASH.

It is a truism that most chronic, so-called stomach troubles are not stomach troubles at all. Not long ago Ewald was quoted in one of our leading medical journals as saying that 95 per cent. of apparent stomach troubles originated outside the stomach. It is the purpose of this paper to consider the more common gastric disturbances, hypersecretion and pylorospasm, significant of organic disease in other organs, in most cases.

These terms simply refer to an excited state of the two chief, normal functions of the stomach. The disturbance of one of these functions is pretty certain to work in a vicious circle, so with the appearance of either the other is likely to follow.

The fact that all the organs aiding digestion are very thoroughly syndicated is perhaps not properly appreciated. Their relationship and interdependence rests upon the following facts:

(1) Their origin. It is known that the stomach and duodenum, as far as the common duct, together with the liver and pancreas are all derivatives of the primitive foregut whose function is the preparation of food for digestion.

(2) The researches of Pawlow and Starling have shed the most powerful light on the functional association and mutual dependence of the digestive organs. They have shown a hitherto unimagined importance of HCl in digestion Through them we know that digestion begins with the thoughts of and desire for food exciting, through vagal stimulation, the first stage of HCl secretion; that the HCl thus produced stimulates the formation of the chemical messenger or hormone (gastrin) in the pylorus which is responsible for the continued excitation of the fundus and for the second stage of HCl secretion; that HCl arriving in the duodenum excites there the formation of those other hormones, secretin and its forerunner prosecretin, which in their turn excite the secretion of bile, pancreatic juice and succus entericus. Not only this, for the succus entericus in the upper gut initiates the formation of a hormone which stimulates absorption and secretion in the midgut.

Again, the reflex mechanism by which the pylorus intermittently and automatically closes, when acid is extruded into the duodenum, and opens when this is neutralized by pancreatic secretion, depends upon the state of gastric secretion.

(3) We are already aware of pathologically associated lesions in the upper abdominal quadrant. The association of gallstones with chronic pancreatitis and adhesions about the duodenum and bile ducts, ulcer of the duodenum and adhesions to the pancreas, ulcer of the stomach and secondary ulcer of the duodenum or vice versa from the hyperacidity caused by the duodenal ulcer. These, and the frequent association of chronic appendicitis and cholecystitis, are common knowledge.

They may be accounted for by infection. Colon and other bacilli are absorbed by the portal circulation and eliminated in the bile, unless destroyed by the liver. They thus initiate the infection which ends in gallstones. Moreover, as has been recently suggested by Morris, both adhesions and ulcer of the pylorus and duodenum may arise from the effects of such infection and its toxins in inducing a terminal arteritis or vascular spasm in the region of the pylorus and first part of the duodenum. This results in loss of vitality and ulcer in the anemic area and a corresponding desquamative process on the opposing peritoneal surface with the production of adhesions.

While hyperacidity has been regarded as the common cause of ulcer, it may as likely be its sequel, for we know that such lesions outside the stomach—as gallstones and chronic appendicitis—not infrequently produce gastric hypersecretion. The companionship of chronic cholecystitis and appendicitis may be explained by the copious outpouring of colon bacilli in appendicitis being taken up by the portal circulation.

The interdependence of liver and pancreas is acknowledged by all. Thus 81 per cent. of cases of chronic pancreatic disease are caused or accompanied by gallstones (Mayo), because the resulting infection invades the duct of Wirsung. Conversely, in most cases of chronic pancreatitis jaundice from pressure is present, since in 62 per cent. of persons (Helly) the pancreas surrounds the common duct. This relationship of the stomach to its near-by organs accounts for its disturbed functions in disease of other members of the group and indeed gastric disturbance is often the prominent symptom of the basal disease.

Fenwick, in his admirable work based on an experience of 18,000 cases of indigestion, analyzes 500 cases of dyspepsia occurring in private practice and finds a third to be hypersecretion. He further affirms that chronic hypersecretion is invariably a symptom of organic lesion and that lesion is usually situated outside the stomach. He finds in 112 cases of hypersecretion operated on during the last two years that the real condition was as follows: Duodenal ulcer, 46 cases; gastric ulcer, 12 cases; gallstones, 12 cases; chronic appendix alone, 22 cases; gastric ulcer and gallstones, 3 cases; duodenal ulcer and gallstones, 3 cases; ulcer and appendix, 4 cases; and pyloric cancer, 4 cases.

One, nevertheless, finds pages in Fenwick's and other "stomach books" on the symptomatology of hypersecretion. Is it not rather absurd, after having acknowledged that hypersecretion is itself but a symptom, to then proceed to elaborate the symptoms of a symptom.

But the so-called hypersecretion is usually combined with pyloric spasm and one or both may indicate the presence of either of the above lesions noted, and of some others.

Thus pylorospasm is often the chief symptom of chronic cholecystitis or appendicitis. The salient symptoms of pyloric spasm are eructations, regurgitation of food taken many hours before, vomiting at the height of digestion, and burning, or more or less severe pain. Its presence is made pretty positive by finding intermittent retention of food in the stomach after the normal period of digestion. As a matter of fact, food remnants are rarely found in the morning test meal unless there be actual pyloric obstruction.

In chronic hypersecretion, in addition to the vomiting of acid chyme and various symptoms of hyperacidity and pyloric spasm, we have as the essential feature the finding of considerable amounts (4-15 oz.) of acid gastric juice in the fasting stomach in the morning, or of finding more fluid than usual after the test meal with a total acidity of 70 to 110 (Fenwick). Hypersecretion and pyloric spasm are symptomatic of many lesions and those, with the exception of gastric ulcer, lying outside the stomach. Thus the lesions noted by Fenwick—duodenal and gastric ulcer, gallbladder disease and chronic appendicitis.

Besides these, pancreatic calculus, cancer and tuberculosis of the cecum, loose kidneys and eye strain may be included in the list, and occasionally early pyloric cancer grafted on ulcer. But while hypersecretion and pyloric spasm are suggestive of these factors they are pathognomonic of none. They may be even absent in them. Thus I have seen hyperacidity alternate with subacidity in both chronic appendicitis and cholecystitis.

The crying need is for some one test which will solve the diagnosis in the maze of digestive symptoms. There is none but there are many which will help, providing one has the clinical experience to give the finding its proper importance. Many tests in vogue with gastrologists are fantastic and misleading, if one accept their supposed value at par. Thus the bucket trailing through the entrails dangling by a string.

Even the occult blood test is often accidental and must mislead if too much importance is attributed to it. Some time ago I saw a patient crushed and losing a pound a day following a mistaken diagnosis of gastric cancer given him because, with digestive symptoms, occult blood had been found. In 250 cases of gastric ulcer—in which disease stomach findings are thought to be especially valuable—it was noted by Guthrie and Graham that in the majority of cases the acidity was normal or low, and blood was found in but one-quarter of the cases.

Baar's interesting contribution in May, 1911, NORTHWEST MEDICINE as to the diagnostic value of indican and bile in lesions of the digestive tract, will be extremely valuable if time sustains his contention. Cabot, in Physical Diagnosis, pp. 399 and 430, says of indicanuria in intestinal disease, "rarely of value," and "the testing for indican does not seem to justify the time spent. Simon's lucid arguments for the value of the indican test have not been borne out by my experience with it in diagnostic puzzles."

The only safe way is to consider the general clinical picture of each case rather than to expect to make a diagnosis by some sure test. To the gastrologically-inclined clinician rather than to the laboratory-bound gastrologist must we look for diagnosis in these stomach-like or near-gastric disorders.

The same symptoms frequently occur in most of the disorders under discussion, as gas, pain, distention, nausea, eruction, regurgitation and vomiting. It is chiefly their *grouping,* the *time* and *regularity* of their occurrence, the predominance of some, the means by which they are relieved, and their intensity that we must consider.

Graham and Guthrie have worked out the dyspeptic symptoms in 250 cases of chronic appendicitis coming to operation. While resembling ulcer and gallstones, yet the pain radiates rather toward low gallbladder or high appendix region and not, as in gallstones, upwards and backward. Unlike ulcer, the pain comes on soon after food and is not relieved by food, drink, alkalies, irrigation and vomiting, as in ulcer.

While periodic attacks occur, there is not the clear-cut attack, and the definite location of pain as in gallstones. Vomiting is not so common as in ulcer and occurs soon after eating. The chief complaints are nausea, distress, gas and distention. The test-meal gives negative evidence; sometimes there is hyperacidity. The symptoms are due to pyloric spasm but food remnants are not found in the stomach and rarely dilatation. The clinching evidence is a history of attacks of bellyache in youth, or tenderness over the appendix.

In either gastric or duodenal ulcer the symptom-group is usually characteristic. Epigastric pain coming one to four hours after food and recurring with great regularity meal after meal and day after day at the same time, and relieved by food, drink, irrigation, alkalies and vomiting, the attacks being separated by long intervals of complete relief.

Gastric hemorrhage is of course pathognomonic, occurring with such a history but is wanting in a large proportion of cases and, if occurring without the dyspeptic history, it probably arises from other causes. The tender epigastric spots usually mentioned as among the most diagnostic signs are not of much importance.

It is unnecessary to describe the symptom-group in typical gallstone attacks. The diagnosis of chronic cholecystitis without stone is more difficult. In this there is often both pyloric spasm and hypersecretion, although the acidity varies much. I have observed at operation, a complete blanching of the pylorus, so great was the spasm. Here acid regurgitation, and perhaps vomiting at the height of digestion, with burning pain in the epigastrium and along the gullet, and choking, may occur from the pyloric spasm and acid chyme brought up. Without tenderness at times over the gallbladder, diagnosis must be presumptive only.

Besides the typical gallstone colic and the later stage with complications, as adhesions, chronic pancreatitis and duct obstructions, Graham describes two other types which he regards just as characteristic. First; mild, transient attacks of gas, upward pressure, sudden and short and disappearing rapidly by belching, regurgitation or slight vomiting. Suddenness and irregularity is the striking feature. Second; prolonged, steady attacks of mild or severe pain in the epigastrium, liver or right hypochondrium. The pain may be increased by food, exertion or motion; deep breathing causes pain and if felt in the back it may be attributed to pleurisy.

With loose kidneys as a cause of hypersecretion and pylorospasm I have not had experience. I have, however, secured complete and apparently permanent cure by the correction of astigmatism in cases of attacks of regurgitation and vomiting caused by pyloric spasm, and these have been among the most satisfactory and pleased patients possible. Morris describes such cases which have been sent him for operation with a diagnosis of appendicitis. The cases I have seen have not had appreciable pain. The diagnosis must be made by exclusion and tentative treatment.

In doubtful cases of "stomach trouble" one must always keep in mind kidney stone, pelvic disease, tuberculous cecum and peritonitis, phthisis, tabes, Bright's disease, pernicious anemia, Addison's disease, neurosis and spondylitis.

Summary. It has been my purpose to emphasize the following points:

(1) Stomach troubles are not stomach troubles because the gastric functions are disturbed by lesions of the whole digestive syndicate.

(2) The interdependence of the members of the syndicate hangs upon: (a) Common origin and purpose; (b) the chain of hormones initiated by HCl secretion; (c) common causative pathology and frequency of associated lesions.

(3) Hypersecretion and pylorospasm are symptomatic of ulcer, gallbladder disease, chronic appendicitis, pancreatic stone, cancer and tuberculosis of the cecum, early pyloric cancer, loose kidneys, eye strain. To give the symptoms of the symptom, hypersecretion, is absurd.

(4) Diagnosis is impossible from these symptoms or any special gastric sign or test.

(5) Clinical experience of the symptom-groups in these causative diseases must be our chief guide.

(6) Brief descriptions of the various symptom-groups characteristic of these causative and stomach-like or near-gastric diseases.

NORTHWEST MEDICINE

The Journal of the State Medical Associations of Oregon, Washington, Idaho and Utah.

Devoted to the Interests of the Medical Profession of the Pacific Northwest.

Editorial Office, 719-22 Cobb Building, Seattle, Wash.

JUNE, 1911.

EDITORIAL

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OREGON STATE MEDICAL ASSOCIATION, Portland, July 10-12.

BRITISH COLUMBIA MEDICAL ASSOCIATION, Vancouver, August 31-September 1.

WASHINGTON STATE MEDICAL ASSOCIATION. Spokane, September 5-7.

UTAH STATE MEDICAL ASSOCIATION. Salt Lake City, October 4-5.

IDAHO STATE MEDICAL ASSOCIATION. Boise, October 11-13.

NATIONAL LEAGUE FOR MEDICAL FREEDOM.

It is probable that some of our readers have never heard of the organization bearing this high-sounding name, while others are unfamiliar with its objects and the manner in which it carries on its activities. While the parent organization is one of national scope, it has branches in some states bearing the same name as the original, except for the substitution of the name of the state, while in others its propagation is maintained through a state committee. The latter is true in the state of Washington, in which it spreads abroad its doctrines through a committee located in the Central Building, Seattle, which is provided with a secretary and stenographer, whose time is devoted to increasing the organization by representing to the public that the medical profession, chiefly through the agency of the American Medical Association, is creating a monopoly of treating the sick, whereby other forms of practice and medical beliefs are to be suppressed and extinguished, its promoters' aim being to stir up prejudice and opposition to all measures proposed and advocated by the medical profession. This prejudice has been so ingeniously fostered and propagated that numerous members have been obtained by the branch organizations in the different parts of the country. Its representatives have made special efforts to enlist the support of labor unions, women's clubs and similar organizations. A few months ago they labored strenuously to obtain an endorsement in Washington from the Federated Women's Club, of Seattle, some of whose officers they have secured as ardent supporters. Exposure by some medical members, however, of their mendacity as well as the foundation principles of the organization prevented such endorsement.

The query naturally arises who supplies the money for this propaganda and what is its object. Much light on these questions is revealed in Collier's Weekly issue of June 3, in which are given the names of the directors, showing them all to be either directly or indirectly concerned in the exploiting of certain patent medicines or allied interests. The pretenses of working for the public good, and of counteracting the medical monopoly is simply a cloak to obtain support for the patent medicine interests which have been so hard hit of late by legislation and the press. This, also, is the real reason for this organization fighting so strenuously the effort to establish a department of public health in the government at Washington. Physicians should post themselves concerning organizations of this character, so that they will be in a position to meet their attacks and give correct information as to their designs and purposes.

C. A. S.

LICENSING OF NON-GRADUATES.

That the laws regulating the practice of medicine in Oregon are lax, no one can gainsay, yet some improvements could be made in them within the medical profession. For instance, everybody practising medicine is supposed to go before the State Board of Examiners and secure a license, yet no provision is made as to the qualification of those appearing before the board, nor has the board a right to deny examination to any one appearing before it. The medical colleges of this state could raise the standard of qualifications among licentiates by agreeing not to permit any one to take the examination until he had received his degree in medicine. No student would hesitate to matriculate in a college under such conditions; the State Board of Medical Examiners would be relieved of the embarrassment of licensing undergraduates and there would not be the tendency for the student to lose interest in his college work, as he is very apt to do if he has a license to practise before graduation.

W. C. S.

NEXT MONTH'S MEETING AT PORTLAND.

Although the A. M. A. June meeting at Los Angeles especially attracts the attention of every one at the present time, it is hoped that a large number of physicians of the Northwest will reserve a date for the Oregon meeting at Portland early in July. This will be a unique meeting for a state association, in that few if any local representatives will appear on the program. The purpose is to take advantage of the presence of a large number of distinguished physicians of the East, who will present papers and addresses on important topics. Such men as Murphy, Billings and Butler, of Chicago; Deaver, of Philadelphia, and Ravenel, of Wisconsin, will appear on the program. These many good things will make it well worth the while of all to attend who can possibly do so. The associations of the Pacific Coast are frequently accustomed to favor their members with the presence of one or two Eastern physicians at their annual meetings, who take a leading part in the programs, but the circumstances are very unusual which will permit so large a number of our great leaders to appear among us at one time. It is expected, therefore, that a great proportion of the Oregon profession will take advantage of this opportunity to receive the benefit from the presence of these men. At the same time Oregon physicians hope to entertain good delegations from the brethren of Washington and Idaho. C. S. W.

THE A. M. A. MEETING AT LOS ANGELES.

The meetings of our great national association occur so infrequently on the Pacific coast that the meeting this month in Los Angeles offers a special opportunity for the profession of the Northwest to attend this greatest of medical associations. No attempt is being made to describe the attractions of the meeting, nor those of Los Angeles and Southern California. For all details in these matters we refer our readers to the issue of May 20th, of the *Journal of the A. M. A.*, in which all available information and data are collected. Special railroad rates from the Pacific Northwest to Los Angeles will comprise one fare and a third for the round trip, making the rate from Portland $42.25, Tacoma $48.20, Seattle $49.95, Spokane $57.20. C. A. S.

Some Plain Truths Concerning Arseno-Benzol.

1. Arseno-benzol does not cure syphilis, though it may cause its symptoms to disappear with greater rapidity, and may be more immediately efficacious than mercury.

2. It does not displace mercury in the treatment of ordinary cases; and when it is employed it should be followed by the usual mercurial medication.

3. It is indicated in:

a. Early cases, where it is especially desirable to remove all symptoms as quickly as possible, as for social reasons or to lessen the dangers of contagion.

b. Relapsing or refractory cases of later disease, in which mercury is ineffective or insufficient.

c. Cases in which the integrity of important organs is threatened, and in which haste is imperative.

d. Cases which cannot be subjected to careful and systematic observation and treatment.

4. It is contraindicated in:

a. Cases having serious internal organic lesions.

b. Cases having any optic nerve lesions.

c. Cases of late syphilitic effects, such as tabes, paresis.

5. The best method of administration is the intramuscular one, the clear solution being employed, and the quadratus lumborum site being selected.

6. Hospital care, or its equivalent at home, is required; it should never be administered in the office or dispensary.

(Dr. W. S. Gottheil, Internat. Jour. of Surg., Mar., 1911.)

MEDICAL NOTES

OREGON.

The Southern Oregon Medical Association met in Ashland, May 8, doctors being present from Douglas, Josephine, Jackson, Lake and Klamath Counties. Dr. C. S. White, state health officer, gave a talk in his usual emphatic manner, upon the dangers of the house fly, and methods of fighting this pest. Another interesting address was delivered by Dr. Coffey, of Portland, upon the importance of rest in acute abdominal troubles. Dr. Christopher O'Day, of Portland, was on the program, but was unable to be present, and his place was taken by Dr. Mackenzie.

Hospital in Oregon City. A hospital is to be opened in Oregon City by Miss Parkes, Mrs. Nesney and Miss Bailey, of the Illinois Nurse's Training School, which will be known as the Wildwood Hospital. The location is excellent and the hospital, while small, will be thoroughly modern throughout.

The Mercy Hospital, at Roseberg, was damaged by fire to the extent of $3,000, April 25. Twenty-two patients were in the hospital at the time but were removed to places of safety without accident. The roof and the third story, which is occupied by employes, were the parts damaged. The loss was fully covered by insurance.

Doctors Married. Dr. George A. Cathey and Miss Bertha Kruse were married April 28 at the home of the bride's parents in North Yakima. Dr. and Mrs. Cathey left at once for Portland, where the groom is a practising physician. Dr. A. G. Browning and Miss Marie Wetzel, of Portland, were married April 18, and left immediately for The Dalles, where Dr. Browning will practise.

University of Oregon. At the commencement exercises of the University of Oregon,, May 1, seventeen men receive the degree of M. D. They are as follows: Drs. Frederick Adams, Christian E. Stafrin, John Reith, R. V. Leep, Harry E. Shoot, W. H. Barendrick, James B. Gillis, James M. Bisaillon, Edward H. Anderson, Walter A. Borland, H. A. Canfield, Michael E. Purcell, Albert Mount, C. F. Cathey, G. E. Riggs, Thompson Coberth and B. E. Cohoon.

Chinese Hospital. Portland is to have a Chinese Hospital Association hospital. The association has already about $16,000 in the treasury and will soon commence the erection of a hospital on Flanders Street, between Third and Fourth Streets. The funds have been obtained by subscriptions from Chinese in the city and state.

Dr. E. H. Smith, of Lakeview, has returned from Chicago, where he has been taking a postgraduate course. He was accompanied by his sister, who will spend the summer with him in Lakeview.

Dr. Annie Jeffreys, of Salem, who has been ill for several months, is reported to be in a critical condition.

Dr. J. B. Roth, of Portland, has gone to New York to take up the study of eye, ear, nose and throat work to which he will limit his practice on his return.

WASHINGTON.

Bacteriologist for Tacoma. Dr. C. S. Wilson has been appointed city bacteriologist of Tacoma, to succeed Dr. Catherine Anderson. Dr. Wilson formerly held this position for some time and since he gave it up he made a trip to several other cities for the purpose of postgraduate study along the lines of laboratory work.

Puget Sound Sanatorium. This institution for the care of nervous and mental diseases, which Dr. J. B. Loughery has maintained in Seattle for a number of years, has been obliged to suspend operations on account of an order of the court, as a result of opposition brought against it by the residents in its neighborhood. Dr. Loughery has moved the institution to Steilacoom City, where his former work will be carried on in a new institution bearing the old name. Dr. J. W. Snoke, formerly of the Western Washington Hospital for the Insane, will conduct the sanatorium in connection with him, and will live there as resident physician.

Centralia General Hospital has passed into the hands of a corporation composed of a large number of mill and lumber owners about Centralia. The reason for the formation of the corporation is that there are several thousand men in the nearby camps and mills who have been paying hospital dues, and have had no regular hospital where they may be cared for. It is expected that a resident physician will be placed in charge, whose salary will be about $4,000 a year, thus enabling him to give all of his time to the work of the hospital.

Seattle Pulmonary Hospital. Additions and changes are being made at this hospital which will amount to several thousand dollars. They include a large amount of landscape gardening, the enlarging of the administration building, increase of room for the patients and help, improved plumbing and installation of improved electric fixtures.

Delegate to Tuberculosis Association Meeting. Gov. Hay has appointed Miss Bethesda I. Beals, of Seattle, as delegate to the meeting of the National Association for the Study and Prevention of Tuberculosis, to be held in Denver, June 19-21. Miss Beals is the executive secretary of the Washington Association for the Prevention and Relief of Tuberculosis. In attending this meeting she will represent the tuberculosis work being conducted in this state.

Tacoma's Health Officer. Dr. Edwin Janes has been appointed city health officer of Tacoma, by Mayor Seymour, to succeed Dr. E. M. Brown.

The State Hospital for the Insane at Medical Lake has come into possession of 187 acres of fine land adjoining its present location.

Incinerator for North Yakima. Dr. Tetrau, city health officer of North Yakima, has been in Seattle on a tour of inspection of plants for garbage disposal. He is enthusiastic over the economical way in which garbage is handled and disposed of by incineration, and would advise that North Yakima adopt the same method as soon as possible.

The Skagit County Medical Society held a meeting at Burlington, April 23. The paper of the evening, upon the subject, "Some of the Next Things to do for the Children in School," was presented by Dr. George B. Smith, of Anacortes.

The Whitman County Medical Society held its regular meeting at Palouse, April 17, and was largely attended. Drs. J. H. Neff and Patten, of Spokane, gave an interesting paper on "Blood Vessel Surgery." Following the program, a banquet was served at the Hotel Gale, at which the wives of many of the physicians were present.

Drs. George E. Chamberlain and J. E. McNiven have returned to Aberdeen after a seven weeks' trip to Chicago and Rochester, Minn. They said that the East and Middle West will do well enough for postgraduate work, but for a place to live they cannot be compared to Western Washington.

Dr. F. D. Johnson, of Pe Ell, has moved to Centralia, where he will locate.

Dr. Rush Banks had a bad fall from his buggy on May 10, and narrowly escaped a fracture of the skull. He soon recovered from the shock, however, and was able to be around the next day.

Dr. E. D. Olmstead, of Spokane, who was operated upon in Rochester, Minn., in the latter part of April, has returned to his home, much improved.

Dr. J. H. Clymer has left Walla Walla, where he has lived for the past year, to return to his former home in Colorado.

Dr. J. H. Sargent has returned to his old home in Centralia after practising for some time in Little Rock.

IDAHO.

The Lava Hot Springs, in Bannock County, has been leased by the state for a period of 25 years to Dr. H. W. Clouchek. The doctor has leased this for the purpose of establishing a sanitarium and a percentage of the gross receipts is to be paid to the state. Improvements to the extent of over $25,000 will be begun at once.

Delegates to Denver. The following physicians have been appointed by Governor Hawley to attend the meeting of the National Association for the Study of the Prevention of Tuberculosis, in Denver, June 19 to 21: Drs. William F. Howard, of Pocatello; Ellis Kackley, of Soda Springs; Edwin F. Guyon, of Montpelier; John B. Morris, of Lewiston; William C. Maxey, of Caldwell; Patrick J. Scallon, of Coeur d'Alene; Ralph Falk, of Boise.

Dr. L. B. Stockslager and Miss Florence Barry were married at Albion the latter part of April, and will reside at Oakley.

Dr. Karl Malotte has located in St. Anthony.

OBITUARY.

Dr. James Brewster died in Seattle, May 5, from cardiac asthma. He had been a resident of Seattle for fourteen years and for several years past had been an invalid. He practised medicine for more than forty years. While a medical student in 1861 he enlisted as a private in the Illinois volunteers. He was soon transferred to the hospital boat Woodfred as assistant surgeon and served in this capacity until the close of the war.

Dr. John Sabin died at Coeur d'Alene, Idaho, April 18. Death was due to cerebral hemorrhage. He was born in Granger, N. Y., 65 years ago. He served throughout the civil war in a New York volunteer regiment. After practising for some time in Wicks, Montana, he settled in Coeur d'Alene in 1891. He was one of the best-known citizens in the city and at one time was the only physician in the town.

Dr. Emil Pohl died at Fairbanks, Alaska, May 12, from tumor on the brain. He was one of the pioneers in different mining camps in Alaska, having gone there from Seattle in 1897 and mined at Nome during the years 1899 and 1900. In his early experiences in Alaska he took a prominent part in caring for the sufferers in the epidemic of spinal meningitis at Skagway and Lake Bennett.

Dr. J. D. Carnahan died at Ogden, Utah, April 6, of septicemia. He was the pioneer physician of Ogden and one of the well-known men of the state. He came to Ogden from Virginia in 1877 and practised there continuously until three years ago, when he retired on account of ill health. During the civil war he served in the Confederate army.

Dr. Charles C. Phillips died at Lewiston, Idaho, March 29, from Bright's disease, from which he had been a sufferer for two years. He was born at West Union, Iowa, 42 years ago. He came to Lewiston in 1895 and began the practise of his profession. He was one of the best known physicians of the state and was held in high esteem by the public at large. He always took a keen interest in public affairs and was prominent in the business and social life of the community.

Dr. Claude B. Mattox died in Seattle, April 12, from disease of the heart. He practised at Wheelersburg, Ohio, until last July, when he came to Seattle for his health, having suffered for some time from chronic disease of the heart. He was 47 years of age.

Dr. D. G. McAlpine died at Vancouver, B. C., April 24, death being the result of a street car accident, occuring four years ago. He was born at Argyleshire, Scotland, 76 years ago, but came to Canada as a boy. After graduating from the University of Toronto in 1862 he practised in Ontario for eighteen years. He came to British Columbia in 1884 as surgeon to the construction gangs of the Canadian Pacific Railroad.

REPORTS OF SOCIETY MEETINGS

OREGON.

PORTLAND CITY AND COUNTY MEDICAL SOCIETY.

Pres., A. E. Rockey, M. D.; Secty., G. S. Whiteside, M. D.

The City and County Medical Society met in their rooms in the Medical Building at 8:30 p. m., Wednesday, April 19, 1911, Dr. A. E. Rockey in the chair.

Members present: Drs. Rockey, Marsh, Amos, Short, Creadick, Buck, O'Day, Payne, Johnson, Greene, Cardwell, Rybke, Donnelly, Hamilton, Dunlap, Walker, Murbach, Sifton, A. D. Walker, Hosmer, Jefferson, Coffman, Pettit, Pierce, Knox, White, Holden, Mackay, MacLachlan, Equi, Stearns, Baird, Bodine, Wolf, Webster, Panton, Manion, Gellert. Visitors: Drs. Hauseworth and Rich.

Dr. Irwin C. Sutton was elected a member of the society.

Papers.

Sterility and Its Treatment with Special Reference to the Hirst-Schatz Metranoikter. By Dr. James F. Donnelly. Dealt chiefly with sterility caused by stenosis. Spoke of the various ways of dilating the cervix, etc. Showed the metranoikter and explained its use. Thinks its use reduced sterility a great deal. Patient does not suffer greatly from its use.

Dr. Parrish opened the discussion. Thinks stenosis is rarely ever the cause of sterility. Stated that 80 per cent. of men have some time or other had gonorrhea and that 17 per cent. of the cases of sterility are the fault of the men.

Dr. Creadick explained the removal of the metranoikter after 24 hours.

Supra-condylar Fracture of the Elbow. By Dr. William F. Amos. Described minutely the anatomy of the elbow and explained the various fractures and different ways of setting them. Advocates extreme flexion and demonstrated on skeleton.

Dr. Sommers thinks hyperflexion a better name than extreme flexion and believes di-condylar fractures as well as supra-condylar should be flexed.

Dr. Rich illustrated by drawings various fractures of the humerus and believes the open method the method of the future.

Dr. Pettit enjoyed Dr. Amos' paper but disagrees with him. He uses extension.

Dr. Greene thinks Dr. Amos all wrong.

Drs. Amos and Donnelly closed.

Dr. Rockey read a letter from the A. M. A. stating that Dr. McCormick would soon be here and asking the society to take some action. After a heated discussion the matter was held over until next meeting.

It was moved and carried that a dinner be given at the annual meeting, May 17.

Dr. Arthur Johnson wanted to know if he had a right to leave his automobile in front of the Medical building, in spite of the fact that stores on the ground floor had cards in the windows telling him to move on. Dr. Rockey appointed Dr. Johnson to get an opinion from the city attorney.

The annual meeting of the Portland City and County Medical Society was held in the assembly hall of the Commercial club at 6:30 p. m., Wednesday, May 17, 1911, followed by a banquet in the main dining room of the club.

Annual reports of the secretary and treasurer read and accepted.

Election of officers: William House, president; Noble Wiley Jones, vice-president; George S. Whiteside, secretary; Katherine C. Manion, treasurer. Counselors: W. B. Holden voted to fill Dr. House's unexpired term, F. A. Kiehle, A. Tilzer, M. H. Cardwell, E. P. Geary. Delegates to State Association: E. A. Sommer, George Parrish, Louis Buck, O. B. Wight, Harry Start, J. A. Pettit, L. H. Hamilton, A. K. Higgs. Chairmen for summer meetings: O. B. Wight, June; Chris O'Day, July; E. A. Sommer, August; William F. Amos, September.

WASHINGTON.

KING COUNTY MEDICAL SOCIETY

Pres., G. B. McCulloch, M. D.; Secty., H. E. Coe, M. D.

The regular semi-monthly meeting of the King County Medical Society was held in the Assembly Room of the Chamber of Commerce at 8 p. m., May 1, 1911. The meeting was called to order by the President, Dr. McCulloch, about 65 members being present. The minutes of the last meeting were read and approved.

Clinical Cases.

Cretinism. Maud Parker presented a case of cretinism in a child, giving the symptoms, the clinical findings, and stating that the patient had improved greatly under thyroid extract.

In the discussion, Walter Gellhorn said that at present the case did not suggest to him pure cretinism, but rather some affection of the hypophysis. He suggested an X-ray of the carpal bones which in pure cretinism are under-developed. He suggested also a carbohydrate test, which depends on the fact that cretins have a marked tolerance for carbohydrates. Many of the symptoms of the case point toward a mixed condition.

A. Raymond said that the shape of the mouth, the abundance of hair, and the large size of the child are points against cretinism. He would consider it a disease of the hypophysis.

In closing, Dr. Parker called attention to the marked improvement under thyroid extract, and stated that she thinks it a case of cretinism but probably complicated by some affection of the hypophysis.

PAPERS.

Surgical Treatment of Infantile Paralysis. F. J. Fassett read this paper (See page 159).

The Cerebral Palsies of Childhood. R. P. Smith read this paper, in which he considered the subject under the following heads: difference in structure and physiologic reaction between the young and the adult brain; various forms of cerebral palsies; etiology, pathology, symptoms and signs; diagnosis and the importance of treatment. He presented a case for examination by the society.

In the discussion of Dr. Fassett's paper, H. I. Twiss emphasized the need of careful observation during the course of the disease. Exercise and massage are the most important features of non-operative treatment. In general, no surgical measures of consequence should be done before the 10th year of age. Acetonuria is a contraindication to any operations on tendons or joints.

C. W. Sharples referred to the work of Tubby and Jones on the late treatment of paralysis of the muscles, emphasizing the need of absolute support and rest, together with proper daily external stimulation. He spoke also of the work of the same men on fixation of the elbow at a right angle by the excision of skin.

A. E. Burns asked if a flexor nerve could be transplanted to an extensor muscle or vice versa.

In closing, Dr. Fassett spoke of the bad effects of the over-stretching of muscles on the final return of power. In removing skin for fixation of the elbow, a very large piece must be taken on account of elasticity of the skin. In the transplantation of nerves he thinks a change of cerebration would be necessary with long training, because there is a normal inhibitory impulse to the opposing muscles whenever any nerve impulse is sent out.

In discussing Dr. Smith's paper, D. A. Nicholson called attention to the fact that a slow, hard labor may have the same effect upon a cerebral condition as a forceps case. One should watch carefully for the appearance of any rigidity in a child's muscles during early life. In cases under three years of age there may be loss of speech when the injury is on either side.

N. D. Pontius, in discussing the eye symptoms, stated that many of the cases of squint are due to cerebral palsies and that they are often seen together with nystagmus in incorrigible children. He stated that optic atrophy is rare, and that pupillary rigidity is of no significance.

J. B. Manning called attention to the relation which cerebral palsies also bear to acute infections.

In closing, Dr. Smith stated that mental training is very essential and fairly efficient in cerebral palsies with mental deficiency.

A. S. Tenney, T. R. Loer and W. C. Kintner were elected to membership, and G. C. Bryan became a member by transfer from the New Mexico Medical Society.

The second regular semi-monthly meeting of the King County Medical Society was held in the Assembly Room of the Chamber of Commerce, May 15, 1911. The meeting was called to order by the President, Dr. MuCulloch, at 8 p. m., about 76 members being present. The minutes of the last meeting were read and approved.

PAPERS.

Baldness, Its Cause and Cure. By F. S. Palmer. After touching upon the etiology, he discussed the subject under the heads of congenital baldness and the baldness of old age, for which two varieties little can be done. He then discussed premature and circumscribed baldness, speaking of etiology, causes of dandruff, comparison with other similar skin diseases, and theories of various investigators. In speaking of the cure, he emphasized especially the hygiene of the hair, local applications, bacterin treatment, and the necessity for perseverance.

Reynaud's Disease. By F. L. Horsfall. After exhibiting an X-ray plate of green stick fracture of bones of the forearm in a child, he presented this paper, with report of a case. He called especial attention to the treatment which he had at first instituted, consisting of nitro-glycerin, high frequency current, hot applications, stating that with these measures he had had some temporary improvement, but that after stopping these and using thyroid extract there had been a marked permanent improvement.

The discussion of Dr. Palmer's paper was entered into largely and somewhat humorously by the balder members of the society, F. T. Hyde stating that he had been treated by Dr. White, who had been mentioned in the paper, and he agreed with what had been said as to the dandruff and the necessity of perseverance in treatment.

H. C. Lazelle stated that he had found all forms of treatment unsatisfactory.

C. A. Smith noted the rather complete reversal of opinion among the laity, stating that, whereas formerly there had been a tendency to gauge the value of a physician's advice by the lack of hair on his head and the abundance on his face, now a tendency is growing to consider baldness as unnecessary for wisdom, and a beard as positively unsanitary. He remarked that the paper did not give information as to the method of growing hair on a bald head, and wished to know something about the methods of placing hair upon such a head, if it cannot be grown.

W. A. Shannon had thought when he entered the room that there was to be a large number of clinical cases presented by Dr. Palmer, but upon closer inspection had found that these supposed patients were some of the younger members of the society.

G. A. Dowling reported his observations upon several bald heads, and gave quotations from the remarks of the patients.

In closing, Dr. Palmer called especial attention to the promise of good results in the treatment of baldness by acne bacterin.

In discussing the paper of Dr. Horsfall, G. A. Dowling stated that Reynaud's disease had been reported by Hippocrates and Galen. He called attention to the divergence of opinion concerning the disease under treatment. He mentioned the stimulation by hot applications, Swedish movement, and electricity, and thinks that in many of the cases it is not so much a disease entity as a local manifestation of some systemic disease, and when so, should be treated as such.

F. J. Fassett asked if any good effects had been observed from the use of passive hyperemia; also if erythromelalgia were a similar condition.

L. C. Irwin stated that she has had a patient with the symptoms of Reynaud's disease as a part of the general picture.

G. A. Dowling stated that Cushing has suggested the use of a tight tourniquet for thirty seconds in the treatment of this disease.

H. J. Davidson presented an interesting pathologic specimen of a hen's egg in which a second hen's egg had developed concentrically.

BOOK REVIEWS

Edited by Kenelm Winslow, M. D.

Practical Treatment. A Handbook of Practical Treatment. In three volumes. By 79 eminent specialists. Edited by John H. Musser, M. D., Professor of Clinical Medicine, University of Pennsylvania; and A. O. J. Kelly, M. D., Assistant Professor of Medicine, University of Pennsylvania. Volume II: Octavo of 865 pages, illsutrated. Philadelphia and Londen; W. B. Saunders Company, 1911. Per valume, Cloth, $6.00 net; Half Morocco, $7.50 net.

The second volume of this splendid work deals with the modern rational therapy of diseases of the cardiovascular system and those of infectious origin. Sir Clifford Allbutt treats the former subject after the manner of the foremost medical writers of England. The style, diction, and at intervals a little poetic phraseology combine to make his lengthy monograph classical English as well as authoritative medicine. This should appeal to his American readers, many of whom are too easily satisfied with merely stating facts and figures relating to subjects often very dry at best. The infectious diseases, 36 in number, are dealt with principally by America's foremost authors. They include rheumatism, glandular fever, miliary fever, and some of the tropical diseases. The articles on typhoid and tuberculosis are, as would be expected, quite lengthy and thorough. The illustrations of outdoor life in the treatment of disease are excellent. Throughout the book the modern conception of infectious diseases holds sway. Proper hygiene, prophylactic measures and only symptomatic medicinal treatment for the vast majority of them is recommended. Much attention is paid to serum and vaccine therapy and "606" is mentioned.

von Phul.

Systemic (including Special) Pathology. By J. George Adami, M. A., M. D., LL. D., F. R. S., Professor of Pathology, and Albert G. Nicholls, M. A., M. D., F. R. S., Assistant Professor of Pathology in McGill University, Montreal. In one octavo volume of 1160 pages, with 301 engravings and 15 plates. Cloth, $6.00 net. Lea & Febiger, Philadelphia and New York, 1911.

Those familiar with the first edition of this excellent work will be interested chiefly in learning what that is new appears in this, the second edition. Little has been added; a few pages on the nervous system and functions, and some new matter relative to renal pathology. To those who have not yet had the profit and the pleasure of perusing this and its associate volume on general pathology, by Prof. Adami, the writer feels free to say that to him, personally, these two volumes—more especially that on general pathology—seem the very best in the English language.

West.

A Treatise on Diagnostic Methods of Examination. By Prof. Dr. Hermann Sahli, Director of the Medical Clinic, University of Bern. Edited, with illustrations, by Nathaniel Bowditch Potter, M. D., Asst. Professor of Clinical Medicine, College of Physicians and Surgeons, New York. Octavo of 1,229 pages, containing 472 illustrations. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, $6.50 net; Half Morocco, $8.00 net.

With the first English edition of Sahli out of print for some time the appearance of the second will be welcomed by many. In the new edition the work has practically been rewritten. Many changes and additions have been made embodying the advance in diagnostic methods and physiologic-pathologic conceptions. Professor Sahli has also taken this opportunity to lay before the medical world researches of his own, along lines too numerous to mention, not hitherto published, the whole adding about 300 pages to the volume. This is the most complete, thorough and comprehensive work on diagnosis we possess. It covers all fields except the Röntgen ray and the electrocardigram, a circumstance amply explained in the preface. Here is the work of one of the masters of medicine, not a compilation, but his own work, the result of 40 years of experience and full of his own research and methods, as well as those his own practice has proven most useful. To criticise it in detail or to enumerate its notable features is impossible. Every chapter bristles with them. Dr. Potter has performed a difficult task most excellently. His translation is so well done that he has transplanted the language, individuality and spirit of Sahli bodily into English. His notes and photographs have enhanced the value of the work.

Heavenrich.

Diagnostic and Therapeutic Technic. By Albert S. Morrow, M. D., Adjunct Professor of Surgery, New York Polyclinic. Octavo of 850 pages, with 815 original line drawings. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, $5.00 net.

The supplementary title, "A Manual of Practical Procedures Employed in Diagnosis and Treatment," states precisely the scope of this volume. The wide range of subjects touched upon can be realized only by a survey of the table of contents. The first 275 pages are devoted to a general consideration of anesthesia, general and local, sphygmomanometry, transfusion, infusion, hypodermic and intramuscular injections, Bier's hyperemia, exploratory punctures, aspiration, and collection and preservation of pathologic material. The remainder is given up to detailed consideration of methods for diagnosing and treating diseases affecting special regions and organs. Numerous illustrations, both of apparatus and procedures, add greatly to the value of the book. It is a splendid volume for the specialist as well as the practitioner, and the author is to be congratulated for having brought into one volume such concise descriptions of this multitude of procedures.

C. F. Davidson.

Inebriety. By T. D. Crothers, M. D., Supt. Walnut Lodge Hospital, Hartford, Conn. Harvey Publishing Co., Cincinnati, Ohio. Cloth, 365 pp. A clinical treatise on the Etiology, Symptomatology, Neurosis, Pyhchosis, Treatment and Medico-Legal Relations.

Dr. Crothers has spent the greater part of his medical life in dealing with this class of patients, has thoroughly studied this subject and is widely recognized for his knowledge of it. In this book he reviews the history of alcoholism with its many forms of treatment, as office, private hospital or state institution, dealing with the mental side through religion, pledges, fears and suggestion in its many forms, and from the standpoint of the physical condition with hydrotherapy, massage, electricity, tonics and elimination. He discusses the many secret and specific cures on the market, pointing out why medical men of limited knowledge on this subject occasionally advise such cures, having seen some recoveries. The book is rather long and tedious and inclined to charge alcohol with entirely too many conditions which seem to have other causes. No one should regret the time spent in reading this book as it is bound to broaden his view on the subject of inebriety.

Nicholson.

The Practical Medicine Series. Vol. II. General Surgery. Edited by John B. Murphy, A. M., M. D., LL. D. Series 1911; cloth; illustrated; 611 Pp; $2.00. The Year Book Publishers, 40 Dearborn Street, Chicago.

This is a most excellent and discriminating review of progress. The numerous, valuable addenda and pithy criticisms by the distinguished editor add, as usual, greatly to the worth of the volume. To review a review is a task of supererogation, but there are so many new items of interest that one cannot refrain from mentioning a few. In the use of iodin the fact that the skin must not be wet is generally understood, but not the reason. This is shown by Waterhouse to be due to swelling of the epithelial cells preventing penetration of iodin into the ducts of the glands. Judd tells us how we can save skin flaps due to severing of a limb by traumatism where they become purple and edematous and die from blood stagnation. Cutting such flaps into narrow strips and placing them on the fresh surface of the stump saves the skin and part of the extremity by allowing bleeding and thus overfilling of the flap with blood and gangrene. This method is especially useful in crush of the fingers and toes. Murphy states that in six years he has not operated upon tuberculous, cervical adenitis except to curette and drain suppurating nodes. They are all cured by tuberculins—except the latter. A report of two most extraordinary discoveries is brought by William Mayo from Italy. One that rickets and osteomalacia have been apparently shown to be due to a diplococcus and the disease has been reproduced in rats by inoculation of the same; that these diseases are cured by one inhalation of chloroform acting as an antiseptic. The other that several cases of cancer have been cured by extract of human embryo, this acting to inhibit the proliferation of embryonal cells, according to a well known fact. To exhibit the great progressive and constructive work going on at Rochester it will be found that some 100 pages in this book are devoted to the doings of the various men who constitute the Mayo clinic. It is marvelous. Taking into account the remarkably low cost of this book and its unusual excellence it has no rival.

Winslow.

A Treatise on Diseases of the Skin. For the use of Advanced Students and Practitioners. Bq Henry W. Stelwagon, M. D., Ph. D., Professor of Dermatology, Jefferson Medical College, Philadelphia. Sixth Edition; revised. Handsome octavo of 1195 pages, with 289 text-illustrations, and 34 full-page colored and half-tone plates. Philadelphia and London: W. B. Saunders Company, 19100. Cloth, $6.00 net; Half Morocco, $7.50 net.

The rapid advances made in all branches of medicine in the past ten years is well exemplified in Stelwagon's Treatise on Diseases of the Skin. The author has adhered throughout to that idea which has characterized all of his writings, viz: the practical side of the subject. The work is presented in such a manner that a full comprehension of the diagnosis, treatment and symptomatology of the more common skin affections can be easily obtained by those engaged in general practice. Pathology and histopathology, although necessarily brief, are given due consideration. Much new material has been introduced. The article on pellagra, sporotrichasis, grain-mite dermititis have been alloted much space and given much attention that even the most recent literature could not improve on their completeness.

It is refreshing to note the attitude which the author takes in his instructions concerning treatment. He emphasizes the point that hygienic and general measures are equally important as appropriate local applications. Many valued formulae both for internal and external use are detailed. One of the most important additions on treatment is that on the uses of carbondioxide snow. The Wassermann serum reaction test for syphilis is accorded recognition and is referred to as being valuable in reaching conclusive diagnosis in doubtful cases. The book is profusely illustrated with excellent cuts which aid materially in correctly interpreting the subject at hand. Essentially, a ready reference book, eminently practical, entertainingly written and indespensable to a complete medical library.

Redon.

The Practice of Surgery. By James G. Mumford, M. D., Instructor in Surgery in the Harvard Medical School. Octavo of 1015 Pp., with 682 Illustrations. Philadelphia and London: W. B. Saunders Company; 1910. Cloth, $7.00 net; half morocco, $8.50 net.

This volume is intensely practical and contains more of real value to the average surgeon than any other work on surgery of the same number of pages. Subjects are taken up in the order of their frequency and importance and in this respect the book is unconventional. The treatment of the various subjects is practical, concise and up-to-date. Written in the author's well-known easy style, the book is not hard to read, but is absorbingly interesting. More attention is being paid year by year to surgery of the chest, and here we find considerable space devoted to this branch of work. The importance of total extirpation of cancer and the glands which may be involved is set forth with emphasis. Most of the plates are new and the artist is to be commended for the clearness with which conditions are portrayed and operative steps illustrated. The book is a welcome addition to the literature of surgery.

Hooker.

The Practical Medicine Series. Volume 1. General Medicine. Edited by Frank Billings, M. S., M. D., and J. H. Salisbury, A. M., M. D. Series 1911; 405 Pp.; cloth. $1.50. The Year Book Publishers, 40 Dearborn Street, Chicago.

In this book will be found a valuable summary of recent experiences with vaccine treatment. A great deal of space is given to progress in matters pertaining to tuberculosis. There is a most thorough and admirable review of recent work bearing on circulatory diseases. Under this head we find Osler's masterly Lumleian lectures on angina pectoris. His classification and description is beautifully clear and lucid, while his treatment abounds in common sense and helpful suggestions and the whole writing is animated by his rich literary style and enriched by many classical allusions. There is a singularly good article by Satterwaithe on myocarditis, in which he shows that it is not only the most important but by far the most common cardiac disorder. The treatment of arterial hypertension by Elliott is another noteworthy article. Mumford's summary of paper on Graves' disease possesses much value. He advises first, recourse to hydrobromid of quinin and Roger's and Beebe's serum for two months and, if improvement does not occur, operate. The review of progress in this book is as excellent as would be expected from the high reputation of its editors. The low cost is far from being a negligible feature.

Winslow.

Practical Points in Nursing. By Miss Emily M. A. Stoney, Late Superintendent of Training School for Nurses, Carney Hospital, Boston, Mass. Fourth edition, revised. 12mo of 495 pages, containing 105 illustrations. Philaphia and London: W. B. Saunders Company, 1910. Cloth, $1.75 net.

This is a good, practical book and is divided into eight parts. 1. The nurse, her responsibilities, qualifications, etc. 2. The sick room, its selection, preparation, management, etc. 3. The patient, duties of nurse in medical, surgical, obstetric, gynecologic cases, etc. 4. Nursing in accidents, emergencies. 5. Nursing in special diseases. 6. Nursing of infants and sick children. 7. Physiology and anatomy. 8. Feeding the sick, recipes, weights, dose list, glossary.

Winslow.

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Entered March 14, 1903, at Post Office, Seattle, Wash., as Second Class Matter, under Act of Congress of March 3, 1879.

VOL. III. New Series. JULY, 1911 No. 7

ORIGINAL CONTRIBUTIONS

SOME CONSIDERATIONS OF TUBAL PREGNANCIES.*

By J. A. Pettit, M. D.

PORTLAND, ORE.

Tubal pregnancies come in the category of those acute and dangerous surgical conditions which are brought to the consideration of the surgeon at unexpected times, and sometimes in individuals in whom a pregnancy is least to be suspected on account of the patients' social standing. The gravity of the condition and the importance of early diagnosis make it a subject for the keenest consideration, and place no less responsibility for an early diagnosis upon the surgeon's shoulders than does the condition of an acute appendicitis or perforating ulcer of any part of the alimentary tract. The early diagnosis and prompt operation in such a condition is even of more importance than in a perforation of the alimentary tract, where nature shows a greater power to wall off the infection produced by the escape of the alimentary contents than is manifested in checking the hemorrhage of a ruptured ectopic. The purpose of the writer in bringing up this subject today and presenting the few illustrations has been actuated by a successive run of seven of these cases, each one illustrating a different phase of this surgical condition.

Viewing the subject from an etiologic standpoint, there are numerous theories for the arrest of the fertilized ovum in its passage through the tube, or for the fertilization of the transient ovum while passing through the tubal canal and its implantation therein. The arrest of the ovum is in all probability largely due to mechanical obstructions, of which there may be many forms and kinds. In the study of fertilization upon the lower animals, it has been definitely ascertained that the spermatozoa readily ascend the uterine and tubal canals, and emerge at the fimbriated end to hover about the ovaries. In fact, the motility which carries them up that far has been known to last for several weeks after the last copulation, and their virility to persist as they float about in the peritoneal fluid. In making experimental observations upon animals, it has been proven that the spermatozoa *normally* ascend the Fallopion tubes and have frequently been demonstrated swimming about in the free peritoneal fluid in the cul-de-sac and on the surface of the ovary. It has likewise been demonstrated that spermatozoa may retain their virility for a long length of time, and one writer has demonstrated that in the female bat this virility may last up to six months after the last copulation. One case is reported in literature in which spermatozoa were demonstrated in a normal uterine tube of a woman three and a half weeks after the last copulation. This authentic observation tends to prove that fertilization of the ovum can readily take place in the tubal canal and probably most frequently does, and that ectopic gestations occur simply by reason of a mechanical interference with the passage of the *fertilized ovum* into the uterine cavity.

Cases are recorded where, with an ovary absent on the side of a healthy tube, the ectopic pregnancy has occurred in the distal portion of the opposite and constricted tube where the ovary existed, or a normal pregnancy has occurred under the same anatomic condition; and other instances of similar nature definitely show that fertilization does not necessarily take place in the same tube through which the spermatozoa ascended, nor does the ovum on a specified side necessarily descend through the tube on the same side as the ovary which produces it. It would appear from all accessible evidence that fertilization in most cases of pregnancy occurs either in the abdominal cavity or in the tubal canal, least frequently in the uterine cavity, and the cilia of the mucous membrane carry the *fertilized ovum* just as they carry the *unfertilized* ovum down to the uterine cavity, where the phenomenon of implantation and growth normally takes place. It would also appear that the fertilized ovum will not implant itself upon the tubal mucous membrane unless it is mechanically held in place for a definite length of time; and neither will it implant itself upon the uterine mucosa if it be the seat of any chronic inflammatory or catarrhal disease as is demonstated in certain cases of sterility.

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*Read before the Eighteenth Annual Meeting of the Idaho State Medical Association, Boise, Idaho, Oct. 6-7, 1911.

When the fertilized ovum is arrested in the tubal canal, the subsequent course of the condition, which at once becomes surgical, arises; first, according to the location of the implantation, in the fimbriated end, the ampulla, or that part of the tube which passes through the uterine musculature; second, according to the degree of nutrition, which it may be able to derive from that particular part of the membrane in which it makes its implantation, which, therefore, determines whether its growth shall be great or little, rapid or slow. Those implantations which occur in the portion of the tube passing through the uterine musculature, and which are commonly termed interstitial extrauterine pregnancies, may even pass on to normal labor in this way; as the growth progresses the developing fetus and its amnionic sack are pushed out into the roomy uterine cavity, the placenta retains its attachment in the dilated uterine horn, and the gestation goes on to term accompanied, as a rule, however, by a great amount of pain. In the event of implantation occurring in the ampulla of the tube the condition is surgical from the start and is bound ultimately to come to operation or premature fatality with but few exceptions. As a rule, the growth is slower than in the normal intrauterine gestation, as the nutrition derived from the tubal mucosa is probably inadequate for the normal rapidity of growth; and if the growth be sufficiently slow, the moderate elasticity of the tubal walls will accommodate the gradual increase in size and the gestation will go on for weeks or months.

More frequently, however, there is a sudden and early giving away of the tubal wall, which may occur following a physical strain upon the part of the patient, or even while she is lying quietly in bed. At such a time, there occurs the familiar picture of collapse and exsanguination when, under proper surgical environments, a combination of celerity and skill, in which celerity predominates, is needed to save the life of the individual. An ectopic gestation in this portion of the tube, no matter whether rupture does or does not occur, is always fatal to the child and not infrequently to the mother, in the event prompt diagnosis and proper surgical treatment are not available. The fertilized ovum is frequently implanted in some small pocket or diverticulum of the ampulla of the tube, in which case the implantation usually lies upon attenuated tubal structure, and these cases result in early rupture.

A less dangerous position for a tubal implantation of the fertilized ovum is near the fimbriated end, in which event the tube drops down into the cul-de-sac at a very early date, and usually there occurs an early, intermittent extravasation of blood through the fimbriae, which occasions a localized mechanical peritonitis with the resultant pain that early brings the patient to her physician and to proper surgical treatment or, if such an auspicious event does not occur, the nature of the peritoneum is stimulated to the formation of protective adhesions between the uterus, intestines and omentum, thus walling off the bleeding area in such a place and manner that a certain degree of mechanical pressure is brought to bear to the extent of controlling dangerous hemorrhage A hematocele thus formed may gradually attain considerable size, and if not brought to the operating table may become infected and a pelvic abscess be the resultant condition, or by gradual absorption the hematocele may disappear, leaving a mass of adhesions.

The implantation of the fertilized ovum upon the mucosa of the tubal canal is necessarily less perfect than when the implantation occurs upon the uterine mucosa, which is adapted for this purpose. Therefore, the placenta frequently becomes detached early in the pregnancy, thus stunting further development of the fetus and giving rise to successive hemorrhages within the tube, which accumulate around the placental mass and distend the tube with clotted blood. Such a condition may present the appearance of a tubal mole or tubal cast, as shown in one of the illustrations. Sometimes these casts will be forced out through the fimbriated end, or else may simply project through the fimbrae, being too large to pass outside. Such a tubal abortion as this may result in spontaneous recovery, and the diagnosis may never be made. On the other hand, the tube cast or coagulum may undergo degeneration and suppuration instead of absorption, and the case will come to treatment as an ordinary tubal or pelvic abscess.

The diagnostic signs of ectopic pregnancy furnish a subject that can be dwelt upon at the greatest length, because the symptoms are so extremely variable according to the degree of growth of the particular case, as well as the place of implantation. Its recognition depends upon a careful consideration of all the subjective, as well as the objective evidence to be obtained from the individual case in question. As a rule, there are presented some of the early classical symptoms of a normal pregnancy but, as we all know, in many individuals there are no subjective symptoms of normal pregnancy, and in such instances it is not to be expected that they should appear in an extrauterine conception. The short intermission of regular menstruation is frequently covered by the bleeding, occurring from the decidua vera which usually forms in the uterine cavity in the early stages of ectopic gestation. *Pain, of unusual severity and of unusual existence, intermittent in its character and unexplainable by previous pathology or present local trouble is one of the most pathognomonic signs.*

To sum up the method of diagnosis in a nut shell, it must be made by exclusion. There are presented to us pain and slightly disturbed menstruation. Then by a careful consideration of the subjective, as well as objective evidence in the particular case, an early diagnosis is possible by the elimination of any other etiologic cause therefor. In fleshy individuals the bimanual palpation of small enlargements, such as we find in an ampullar type, is well nigh impossible, yet this particular type presents the greatest menace to life by its liability to early rupture and rapid hemorrhage. The severity of the pain felt in such a case, both subjectively and by manipulation, either with or without other subjective symptoms, and the absence of other previous or present pathology, renders, as a rule, a diagnosis of ectopic pregnancy reasonably certain and is sufficient indication for laparotomy. Especially in such a case as just mentioned with that characteristic pain in which menstruation, which has formerly been regular, has suddenly ceased for one or more months, then returns in an irregular way at intervals of two or three weeks, wherein there has been no specific disease nor previous pelvic trouble, the surgeon may readily diagnose an ectopic pregnancy; or even in the absence of that peculiar pain which has not yet come because the case has not gone on to the point of leakage, or producing other peritoneal irritation, he may hold it under strong suspicion.

In doubtful cases there is, however, a last and comparatively reliable resort, to be made in the pathologic laboratory. A microscopic examination of the products of this disturbed or irregular menstruation will reveal its true character as that of the decidua vera, which almost invariably forms on the uterine mucosa simultaneously with the inauguration of the activities of gestation in the Fallopian tube.

With a large accumulation of coagula in the cul-de-sac, spreading out laterally, difficulty may be experienced, in fleshy subjects especially, in eliminating the possibility of normal intrauterine pregnancy. The fact must also be borne in mind that the uterus normally undergoes an hypertrophy equivalent to a four to eight weeks' pregnancy, when the gestation is extrauterine. In such an event an aid to diagnosis can be had by grasping the cervix with a vulsellum, pulling the uterus downward, and at the same time, with the digits in the vagina, outline the uterine body and the presence of the second mass posterior to it.

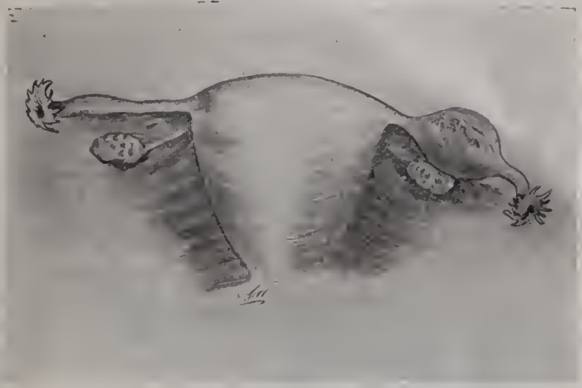

Fig. 1.

Case 1 (Fig. 1). This illustration presents the class of cases in which the gestation is checked in its growth, and there is a formation of what is sometimes termed a tubal mole or tube cast. This case was curetted by another physician one month before our operation on account of an evident miscarriage, which, however, was very likely the shedding off of the decidua vera from the uterine cavity. Intermittent bleeding and continuation of pain brought the patient ultimately to our consideration, when a diagnosis of ectopic was made along the lines spoken of in this paper.

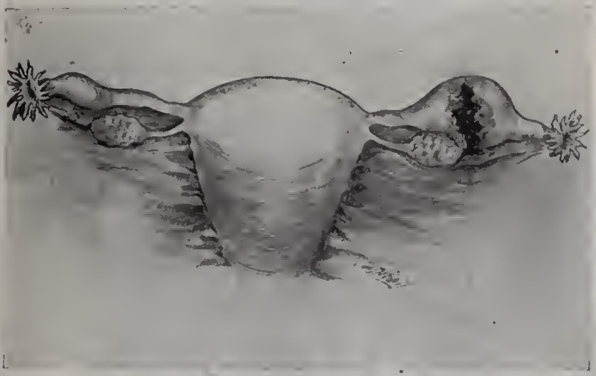

Fig. 2.

Case 2 (Fig. 2). The condition illustrated in this drawing was found in an unmarried girl who had no symptoms whatever according to the evidence elicited from her. While doing her household work she had a short, violent pain and sank upon the floor into a collapse, which was marked by the pallor of exsanguination and the absence of a radial pulse. An operation done as soon as the patient could be removed to the hospital revealed the abdomen filled with fresh, fluid blood and the active hemorrhage temporarily checked by the presence of a blood clot in the irregular opening in the tube.

Case 3 (Fig. 2). This same illustration represents the condition found in another case, in which the rupture occurred early in the morning before the woman had arisen for the day. In this particular case the immediate hemorrhage was not temporarily checked by the presence of a blood clot, and this fact added to an almost two hours' delay by reason of the ambulance going to another part of the city due to the misinterpretation of directions, made it possible for the woman to become so exsanguinated that she died from shock several hours after the operation. In this particular case the life might have been saved had there been proper means for immediate operation, or possibly if there had been no delay in expediting procedures as they were.

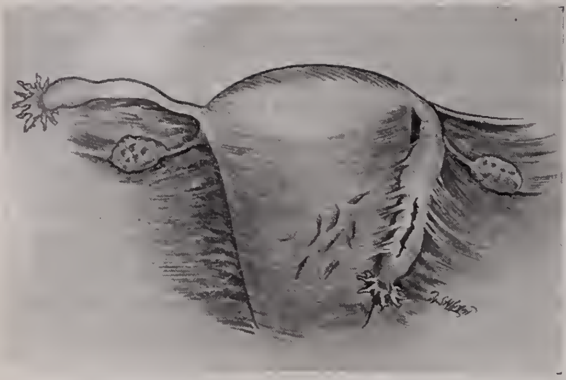

Fig. 3.

Case 4 (Fig. 3). This drawing illustrates a case in which nature played her role well. The illustration shows the appearance of the tube after all adhesions had been cut away and the intestines withdrawn from the field. This rupture, according to the subjective evidence of the case, occurred early in December and from that date the woman suffered marked pain and other classical symptoms associated with localized pelvic peritonitis and adhesions. She came to our consideration late in February, and the operation revealed this mass of adhesions in the presence of numerous old coagula and a rent tube.

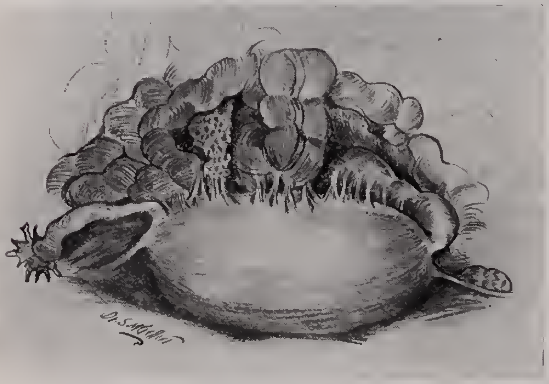

Fig. 4.

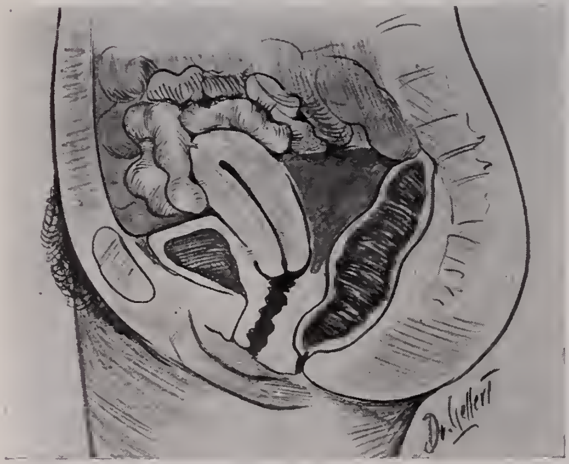

Fig. 5.

Case 5 (Figs. 4 and 5). These illustrations are that of another case in which there occurred a gradual tubal abortion with the formation of sufficient adhesions to protect the woman from imminent danger. The hematocele in this particular case was rather large and the coagula were removed from the cul-de-sac by the handful. The subjective evidence of the case furnished testimony for its beginning about May 1, and she came to our consideration early in July, just a little over two months later. During this time she suffered great pain, was confined to her bed considerably and unable to undergo much exertion. At the time of our consultation she showed the pallor of persistent loss of blood. One interesting feature of this case is the fact that a few years before she had undergone an operation for ectopic gestation which occurred in the tube on the opposite side. The first illustration shows appearance of pelvis as seen upon opening the abdomen. The second is a diagramatic illustration of contents of cul-de-sac.

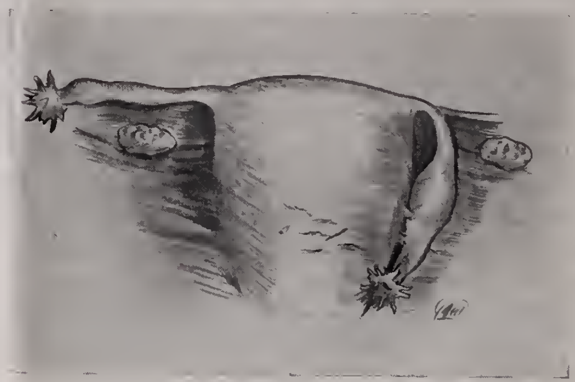

Fig. 6.

Case 6 (Fig. 6). This illustration is that of two cases in one of about six weeks' standing. There had been a slight menstrual irregularity which the lady did not particularly notice. She felt a peculiar agonizing pain for about one hour on a certain afternoon, which promptly left and the next day she was in a normal condition. The same pain was felt for a shorter time the next day and as promptly passed off. On the following day she reluctantly consented to operation, and in a consultation secured some backing for procrastination. However, the operation was done and we found the condition here presented, the extravasation of blood at the fimbriated end with the production of mechanical irritation to the peritoneum, and pain associated therewith.

In the other, menstrual irregularity had persisted for about two months. On a particular Saturday she had the typical agonizing pain, pallor and collapse. During the five succeeding days she had slight repetition of the same chain of symptoms, and was treated symptomatically during this period. The following Thursday she was brought to our service, and operation revealed the same condition as the previous, with the addition of numerous free clots in the abdominal cavity.

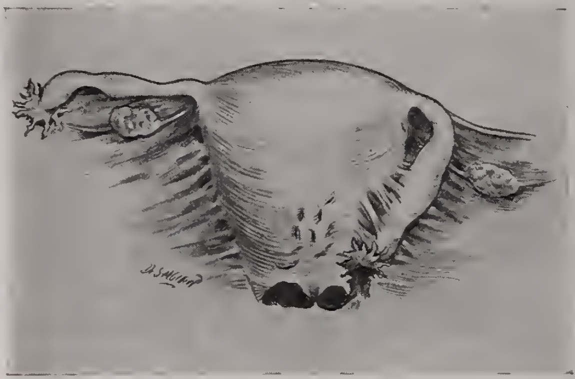

Fig. 7.

Case 7 (Fig. 7). This illustration also portrays the condition found in still another case, in which, however, the hemorrhage was somewhat greater on account of a more persistent procrastination upon the part of the patient in coming to operation. Two of these latter diagnoses, as well as that of one other case portrayed, were made in the face of avowed chastity.

EXTRAUTERINE PREGNANCY.*

By Ezra C. Rich, M. D.

OGDEN, UTAH.

The arrest and development of a fertilized ovum before it reaches the uterine cavity is known as extrauterine or ectopic pregnancy. Operation by abdominal section for the cure of this condition was done as early as the fifteenth century, and in 1752 Bohmer ifferentiated tubal, ovarian and abdominal forms of etopic gestation. The frequency of this form of regnancy is estimated at one case to from three to ve hundred cases of normal intrauterine gestations.

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*Read before the Sixteenth Annual Meeting of the Utah State Medical Association, Salt Lake City, Utah, Oct. 3, 4, 1910.

I shall not attempt to discuss the different varieties ' extrauterine pregnancies dependent upon the sit- ation of the developing ovum or the treatment of the rer forms which is so well described in all the re- nt text books on this subject, believing the time will better spent in confining myself to the common mptoms which would lead one to a careful exami- ation of cases in which extrauterine pregnancy may expected.

The cause of this condition has been classified as ostacles within the lumen of the tube arresting the ownward movement of the fertilized ovum, diseases ' the tubal walls and peculiarities in their formation nd development, and to factors acting outside of the bes by which their lumen is narrowed or occluded. previous history of gonorrhea has been greatly over- timated as an etiologic factor in the causation of trauterine gestation. Probably the most frequent use is a persistence of a fetal type of the tube and verticula developing from the inside of the tubal all in which an ovum, especially if it should be mewhat enlarged, would be arrested.

In the last five years I have seen in my practice enty-four cases where a diagnosis of extrauterine regnancy was made. Two were not operated upon nd the diagnosis could not be verified, although I n sure they were cases of tubal abortion, in which bal absorption took place and the patients recov- ed. In the twenty-two operated upon, one proved be an ovarian cyst, two pus tubes, eighteen tubal regnancies and one interstitial or tubo-uterine ges- tion with rupture into the abdominal cavity. All e cases recovered and were able to sit out of bed in o weeks.

Of these nineteen cases, one gave a history of gon- rhea and the opposite tube was entirely occluded; o had a history of mild puerperal infection and e other tube at the time of operation seemed nor- al. Three of the cases had not borne children, one d given birth to nine, but gave a history of mild erperal infection, following the birth of the first ild. The tubes removed were not examined well ough to give an estimate of the number of congen- al deformities responsible for the arrest of the ovum fore it reached the uterus. Several writers on this bject have noted that these cases come to them in os or threes at a time. Once I operated upon three ses in one week and twice four cases in one month. have given a short resume of my cases here before tering into the symtomology, diagnosis and treat- ent, in order that some of the cases may be de- ribed more in detail.

The diagnosis of extrauterine pregnancy is not given the attention its importance demands by teachers of obstetrics in medical schools. There are very few more urgent conditions to the average practitioner, owing to the fact that a great many of these cases are not seen until after the rupture of the sac and then the symptoms are so alarming that a diagnosis must be made and treatment advised immediately.

The clinical symptoms and history may differ somewhat with the different parts in which the ovum is developing, yet there are the general symptoms which are common to all forms of pregnancy and, in addition to these, almost always severe pains at times in the region of the developing ovum. There is generally absence of menstruation up to the time of the death of the fetus, which usually occurs from the eighth to the twelfth week and then an irregular or unnatural flow, which continues for some time. Shreds of membrane are often expelled and sometimes entire coats of the uterus are discharged. The vagina and uterus may have a purple tinge from increased blood supply.

The breasts are usually enlarged and often secretion can be expressed. Nausea and other reflex symptoms are usually present. The uterus is slightly enlarged and the os patulous. At one side or behind the uterus will be found a tender painful mass which can be outlined from the uterus. Some writers have described a peculiar pulsation of the blood vessels which I have never been able to discover. The temperature at this time is slightly elevated to 99° to 99½°. Great care should be exercised at this time in an examination. As the mass increases in size the tenderness and pain increases till rupture occurs. The patient is then seized with severe pain in the pelvis, often in the uterus, faints away and recovers quickly and perhaps faints again two or three times. The pulse is rapid and the face pallid; in fact, there are all the symptoms of internal hemorrhage, cold extremities and subnormal temperature.

An examination of the pelvis will now present a very different condition. The mass has disappeared and the uterus will usually be free and movable and, in fact, the absence of any pronounced pathology as far as can be made out by vaginal examination, together with the above symptoms, may be considered a very pronounced symptom of ruptured ectopic gestation. As soon as there is free blood in the peritoneal cavity epigastric pain may lead one to suspect a beginning pleurisy or pneumonia and may similate intercostal neuralgia. If the patient survive the first shock and hemorrhage (and most of them will) there will be a mass form in Douglas's pouch, extending over to the site where the ovum began developing, which will grow but will not be so tender and painful as at first, owing to the relief of tension. Another slight hemorrhage will occur, causing another fainting spell, severe pain and increase the anemia. The mortality, if not relieved by surgical operation, is very high, death resulting from hemorrhage and septic infection.

While the majority of my cases give a history corresponding to the above symptomatology, some have not and I will briefly give the history of one case. Mrs. N., 35 years old, mother of six children, had her normal menstruation two weeks before, was taken suddenly with severe bearing down pains in the uterus, fainted and fell to the floor. I saw her a half hour later. She was pale, pulse 130, temperature sub-normal, still complained of severe pain in the uterus, slight flow. Pelvic examination did not reveal any pathology, color of vagina normal. There was no tenderness of the abdomen but slight dulness over the left ovarian region. For several days she remained in bed, very anemic, pulse 90 to 100, temperature slightly elevated, suffered with pain over the lower intercostal nerves on the left side and epigastrium, slightly to the left of the median line. On the fifth day she had another slight fainting spell and suffered more pain. She was operated upon the next morning and a typical extrauterine gestation occupied the outer third of the left tube and half a pint of clotted blood was removed from the pelvis. Recovery was very rapid.

The diagnosis from other diseases which would simulate ectopic gestation is not always possible and, owing to the fact that they are all surgical, an exact diagnosis is not so essential. The treatment of extrauterine pregnancy is immediate operation by abdominal incision. There are some members of the profession who believe in waiting until after the shock is over and the bleeding has stopped before operating. This method should be followed unless the patient can be taken to a hospital and operated upon by a surgeon of experience, who can do the work quickly.

In eighteen of my cases the bleeding has stopped before they were operated upon. The other one, the case with interstitial pregnancy, would have bled to death. She was sinking very fast and thought dead once by the nurses before she was taken to the operating room. The day before I had made the diagnosis of right sided extrauterine pregnancy and urged immediate operation. They decided to wait a few days and at noon the day following a collapse came and the operation was done as soon as the patient could be gotten to the hospital. When the abdomen was opened the blood flowed freely and the two-months fetus floated out. The tube on the right side was quickly brought up and seemed to be normal. On the left side there was a large hydrosalpinx, which was clamped and removed. Still the bright red blood continued to flow. The uterus was brought well up into the wound and a large rent in the posterior wall under the insertion of the right tube was discovered which was bleeding profusely. The tube was removed down to the rent and the bleeding controlled. Salt solution had already been given under the skin and the wound was closed without drainage. The patient made a quick recovery.

I am partial to a cross-incision above the pubis through the skin and fascia and the external fascia of the recti muscles. This incision gives more room for quick work in the pelvis. Great care should be used in separating intestinal adhesions. If bleeding occur it should be controlled by suture. In one case I opened the sigmoid. It was immediately sutured but a fecal fistula followed. The blood clots should be removed as completely as possible without too much mauling of the intestine and all bleeding points secured. It is not necessary to attempt to wash out blood by irrigation of the abdominal cavity. Drainage should not be used unless there is infection. These patients make a quick recovery. They have slight fever for a few days following the operation, due to the blood left in the peritoneum.

Operating through the vagina is more difficult and much more dangerous. An infected ectopic gestation with walled-off abscess behind the uterus should be opened through the vagina, but even then the surgeon should be prepared to do an abdominal operation if necessary to stop bleeding.

ARMY MEDICAL CORPS EXAMINATIONS.

The Surgean General of the Army announces that preliminary examinations for the appointment of first lieutenants in the Army Medical Corps will be held on July 10, 1911, and September 5, 1911, at points to be hereafter designated. Full information concerning these examinations can be procured upon application to the "Surgeon General, U. S. Army, Washington, D. C." The essential requirements to securing an invitation are that the applicant shall be a citizen of the United States, shall be between 22 and 30 years of age, a graduate of a medical school legally authorized to confer the degree of doctor of medicine, shall be of good moral character and habits, and shall have had at least one year's hospital training, after graduation. The examinations will be held concurrently throughout the country at points where boards can be convened. Due consideration will be given to localities from which applications are received, in order to lessen the traveling expenses of applicants as much as possible. The examination in subjects of general education (mathematics, geography, history, general literature, and Latin) may be omitted in the case of applicants holding diplomas from reputable literary or scientific colleges, normal schools or high schools, or graduates of medical schools which require an entrance examination satisfactory to the faculty of the Army Medical School. In order to perfect all necessary arrangements for the examination, applications must be complete and in possession of the Adjutant General at least three weeks before the date of examinations. Early attention is therefore enjoined upon all intending applicants. There are at present sixty-one vacancies in the Medical Corps of the Army.

TUBERCULOUS ENTERITIS. PERFORATION OF TUBERCULOUS ULCER.*

By Clarence A. Smith, M. D.,
SEATTLE, WASH.

This condition of disease was first observed by Bayle in 1810. It occurs in two forms: (a) As a primary disease which is comparatively rare; (b) Usually secondary to pulmonary tuberculosis as the result of swallowing infected sputum. Its frequency as a secondary condition varies according to different authors from 30 to 90 per cent.

The percentage of primary cases is given as low as .3 per cent. in children by Eisenhardt, while only .1 per cent. of the cases were adults. At the meeting of the Sixth International Congress on Tuberculosis Koch insisted that primary intestinal infection was very rare and supported his view by numerous authors, but the investigations by Fibiger and Jensen seem to place the percentage of primary cases higher. They claim from their investigations that the supposed rarity of the primary diseases, especially among children, is more or less mythical. Fibiger assumes that primary tuberculosis of the intestine is present in about 15 per cent. of all tuberculous cases coming to autopsy.

Orth reported 10 per cent. of primary infection in his observation of 44 tuberculous children. Among a number of American observers only 1 1-3 per cent. of primary infection was found among 360 autopsies. The Germans report 4 per cent. among 236 autopsies, the English reporters having observed 18 per cent. out of 748 autopsies.

The lesions are found chiefly in the ileum which presents 80 per cent. of the cases; in the ileum and colon, 45 per cent.; in the colon alone, 3 per cent., and in the rectum, 7 per cent. of cases.

It is worthy of note that the local processes in the intestines are the most common of any portion in the alimentary tract. The reasons for this are the anatomic structure of the intestinal mucosa, the increased absorptive capacity of the intestinal follicles, the absence of an acid medium which inhibits the activity of the bacilli, the lessened dilution after the absorption of a portion of the intestinal contents which permits a closer contact with the mucous membrane, the separation of the bacilli from the protective coating of mucus in the sputum and opportunities in certain parts of the intestine for the retention of microorganisms.

The ulcers always originate in the lymph follicles or the Peyer's patches and never in the mucous membrane proper. They are promoted by erosions or obstipation. The lymph nodes become swollen and project above the surface as yellowish white masses. Then the mucous membrane covering them breaks down, forming an ulcer with overhanging edges. These may not be numerous, at times only a few nodes becoming involved. After Peyer's patches are affected several ulcers may form and coalesce into one large necrotic surface of irregular outline. It differs from typhoid in affecting a small number of glands or a few Peyer's patches, while in typhoid these glands are generally affected. The ulcers are generally transverse to the intestine and may entirely encircle it, due to the lymph channels running transversely toward the mesentery. In the large lymph trunks of the intestinal wall the tubercle bacilli settle and produce nodules which may occlude the channels. Lymphatics may be seen running from an ulcer to the mesentery studded with opaque nodules. This may account for the occasional distribution of tubercle bacilli in the thoracic duct. which may induce general malliary tuberculosis.

Two types of intestinal tuberculosis are recognized, the ulcerative and the hyperplastic. In ulceration the erosion may be superficial, extending merely to the submucous tissues, or it may involve the entire wall of the intestine and perforate into the cavity. The discrete ulcer as a rule is round and oval and becomes elongated to encircle the intestine by coalescence. Occasionally tuberculous ulcers undergo cicatrization and may then form intestinal stenosis.

In the hyperplastic form there is extensive connective tissue formation, which may produce enormous thickening of the wall. This is usually found in the neighborhood of the cecum, often producing a palpable tumor which may be diagnosed as carcinomatous or syphilitic neoplasm. At the same time, there may be a combination of this form of tuberculous infection with cancer.

Osler states that the symptoms of intestinal tuberculosis are notoriously uncertain. While the disease may present the signs of catarrhal enteritis with diarrhea, pains and fever, these symptoms may be entirely wanting and the patient may present constipation, especially if the colon be free from the disease. There may be blood in the stools but all the authorities state that it is rare to have it in any quantity. The symptoms may resemble typhoid and the patient be treated for that disease.

It is stated that the only pathognomic feature is the finding of tubercle bacilli in the stools. Rosenblatt's method consists in giving laudanum until the stools become hard and then examining the mucus on the surface. The bacilli are usually found on the first examination, with the hard feces apparently scraping the bacilli from the ulcers. Another authority states that in many cases the bacilli can be found by examining the mucus from the rectum, obtained by a speculum.

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*Read before King County Medical Society, Seattle, Wash., March 6, 1911.

The feature of dysentery with abundance of blood and mucus is sometimes observed, but rarely. Fatal hemorrhage sometimes occurs but is infrequent. Perforation is given as a very rare sequel, but one authority states that it occurs in 5 to 10 per cent. of cases, resulting in pericecal abscess and sometimes adhesive peritonitis. Stenosis of the intestine may result from the cicatrization of an ulcer, as previously stated, or as a result of thickened intestinal wall or polypoid growth into the lumen in the hyperplastic form.

The prognosis is said not to be so grave as in pulmonary tuberculosis, from which the patient will probably die if the two coexist. In any case, the patient may live for several years and have periods of improvement.

In the matter of treatment the usual measures for any case of tuberculosis should be employed, which it is unnecessary to detail at this time. It seems as if this would be a typical form of the disease to be benefited by the judicious use of tuberculin and numerous cases have been reported improved by this treatment.

Tuberculosis of the bowel is considered in many cases to be amenable to surgical treatment. Baum recommends surgery whenever the conditions seem to permit of its performance. Shiota has performed eleven resections with only one fatality, all the patients reported as being in good health. In this country McArthur, of Chicago, has strongly advised this treatment, and reports five cases of excessive involvment which have resulted in prompt recovery following operation. Excision is considered most applicable to the hyperplastic type on account of the more circumscribed area of involvment. If excision be not considered advisable, the exclusion of the affected area by intestinal anastomosis is recommended, especially in debilitated cases. Hartman reports 229 cases from a review of the literature, with 46 deaths. Bonney reports a patient of his who was greatly prostrated and had lost over 60 pounds, from whom six inches of ileum, the cecum, all of the ascending and two-thirds of the transverse colon were removed, together with most of the omentum, with the patient making a complete recovery.

I wish to report two cases, partially to illustrate the uncertainty and difficulty of diagnosis.

Case 1. G. B., age 30, came under my treatment after serving for about two years in the Philippines, coming home with intestinal disturbances, the nature of which was given in a very uncertain manner. He had attempted to do light farm work for two or three years before giving up on account of weakness. For about a year before I saw him, he had been confined most of the time to the bed.

His complaint at this time was dysentery. For some months he had had frequent daily stools, containing large quantities of blood and mucus. He complained of considerable abdominal pain, for whi he had taken some opium. He was emaciated to extreme degree; was of a muddy, hectic appearanc He had some temperature of varying amount. times he had presented a varying and moderate d gree of cough. The question of tuberculous infecti had been discussed, but had not been accepted. T opinion of the different physicians seeing him wi me was that it was probably a case of amebic dyse tery, based chiefly on the features of its developin in the Philippines, and occurring with remissions a exacerbations. The fact that amebae could not demonstrated in the stools was not considered to di prove the diagnosis. The quantity of blood a mucus in the stools led to the belief that the ulce were probably in the colon. To more thorough treat this condition I performed an appendecostom Irrigation of the colon by this means greatly minished the number of stools by reason of clearin the colon.

The patient died from exhaustion after being und my care about ten days. The autopsy revealed a ty cal condition of tuberculous enteritis, with many cers about the cecum and a few in the ascending colo In the ileum were over twenty-five transverse ulce many of them entirely encircling the intestine. Son were superficial while others extended deeply in the intestinal wall. There were no perforations n adhesions. This clearly came under the head of t ulcerative type of intestinal tuberculosis. Perha an accurate diagnosis could have been made had son of the diagnostic tests been used which are comm at the present day. The autopsy demonstrated th successful treatment was entirely out of the questio

Case 2. W. T., age 30, came under my care August, 1910. He presented no family or person history bearing on his present condition until t summer of 1907, previous to which he had alwa been in good health and a hard worker. During t summer he was rendered unconscious by being thro out of a buggy by a runaway team, from which dated his trouble. During the next three years experienced night sweats of varying degrees of s verity, sometimes continuous and again appearing intervals. He thought that sometimes he had fev with them, but never used the thermometer. At tim he had loose stools, especially on Sunday, when h work as clergyman rendered him nervous. His usu custom had been two soft stools daily. He nev noticed blood or mucus in connection with them. H reason for consulting me was the night sweats, whi for sometime he had experienced nearly every nigh He was weak, and tired easily. At no time did cough nor complain of pain or discomfort, aside fro weakness.

Physical examination showed him to be fairly w nourished, temperature normal, pulse 80, no anemi Examination of chest revealed nothing abnormal, e cept moderately exaggerated signs at right apex; abdominal symptoms nor tenderness on palpatio His history gave rise to a suspicion of tuberculosi but there was nothing to confirm the suspicion. I prescribed a tonic which later I was told benefited him considerably.

Three weeks later I was called to the house, finding him in bed with a temperature of 101½°. The night sweats had been very severe; otherwise he had no complaint. During the next two weeks, his temperature varied from 99½° to 103°, with pulse as high as 86. A blood examination gave hemoglobin, 100 per cent., whites 8000, with polymorphonuclears 45 per cent. Although several Widals proved negative, I concluded the diagnosis was probably typhoid. At times there was some tenderness and gurgles in the right iliac region and some suspicious red spots on the abdomen. At the end of two weeks there was a gradual decline of temperature, which reached normal. On the afternoon of the normal temperature he had a severe abdominal pain, followed in a few hours by temperature of 103°, pulse 120, abdomen tense, hard and painful to pressure, with pain most marked in the right iliac region. After a consultation it was agreed that he had an intestinal perforation, undoubtedly through a typhoid ulcer.

Operation performed that night revealed a perforation 1-8 inch in diameter, through an ulcer about 1½ by ¾ in., extending transversely to the intestine, situated in the ileum. There were no adhesions. The pelvis was full and running over with liquid fecal matter. The question of resecting the intestine was considered, but thought inadvisable on account of the patient's condition and the fact that other ulcers were observed in the intestinal wall. Accordingly the perforation was invaginated with much difficulty from the necessity of passing sutures through the friable intestine covering the ulcerated area. The caliber of the intestine was necessarily narrowed by this procedure. After the operation an attempt was made to locate the perforation, but, after extracting about 18 inches of intestine, resistance was encountered and it was thought wise to finish the operation without determining the exact location of the perforation. The abdomen was closed with two large drainage tubes in the pelvis. An unfavorable prognosis was given to the family both as to the result of the operation and the ultimate recovery of the patient.

After two or three days of discomfort, due in part to an acute dilatation of the stomach, he proceeded with a comfortable and easy convalescence. The temperature never rose abone 99° and in a week's time the pulse was 80 or less. Immediately following the operation the night sweats ceased, but recurred slightly at the end of a week or ten days. On the tenth day tuberculin injections were begun and given every ten days for the following three months, during which he remained in Seattle. Six weeks after the operation his weight was 138½ lbs., 3¼ lbs. more than before his illness. Early in November he went to California, weighing 140 lbs. About six weeks later, he wrote me that his weight was 145 lbs., this being more than he had ever weighed. In California he was referred to Dr. Pottenger, who continued with the tuberculin treatment.

The second case was unquestionably one of primary intestinal tuberculosis of the ulcerative type. There is every reason to believe this patient will recover, considering the improvement he has made since the tuberculin treatment was instituted. Whether the first was primary or secondary to lung involvment, I do not know, but it had not previously been considered one of pulmonary tuberculosis, being looked upon as a case of dysentery. If the lungs were the original site of the trouble, at the time he came under my treatment the intestinal symptoms entirely predominated.

TUBERCULOSIS OF THE CERVICAL LYMPH GLANDS.*

By W. S. Griswold, M. D.,

SEATTLE, WASH.

The superficial lymphatic glands of the neck lie upon or are imbedded in the deep fascia and are arranged in a circle or collar about the neck, being grouped from behind forward into the occipital, mastoid, parotid, subparotid, submaxillary and submental groups. The deep cervical glands lie along the course of the internal jugular vein. There are two groups, the upper and lower, the upper extending from the base of the skull to the bifurcation of the common carotid artery; the lower, deep cervical glands lie along the lower part of the internal jugular vein. Dr. Geo. Bacon Wood has described a lymph gland that is placed just under the anterior border of the sternocleidomastoid muscle, where it is crossed by the posterior belly of the digastric, external and slightly anterior to the internal jugular vein, which he calls the tonsillar lymph gland, because fluids injected into the tonsil are taken up by this gland. He also finds that injection into the pharyngeal tonsil drains into the node under the sternocleidomastoid near its posterior upper border. Since the upper group of the deep cervical glands receives the lymphatics from the region of the pharynx and the submaxillary group receives drainage from the nose, cheek and gums, we would expect to find, in infections from these regions, enlarged glands below and behind the angle of the jaw. We must remember, however, that communication between the different glands is very free.

Infection can take place in two ways, either through the blood stream or through the lymph stream. Infections by the former method are probably extremely rare, although some claim that, on account of injury to the glands from infection coming from the mouth, they are rendered more susceptible to tubercle bacilli circulating in the blood, and to them this explains the greater frequency of infections in the cervical glands.

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*Read before King County Medical Society, Seattle, Wash., March 6, 1911.

Since about 90 per cent. of tuberculosis of the lymph glands is found in the cervical nodes, it would seem more rational to conclude that the majority of the infections come directly from the mucous membranes of the mouth, nose and pharynx, than to think they first get into the blood stream and later localize in the cervical glands. The majority of cases dying of tuberculosis of the lungs, where careful examination has been made, are found to have tuberculous areas in the tonsil, and some observers have found evidence of tuberculous infection in five to eight per cent. of tonsils removed for all causes.

In most cases it is the human type of bacillus that causes the infection, although a considerable percentage in young children come from the bovine type, and it may be said that the younger the child, the greater the probability of infection being due to the bovine bacillus. The second decade is the time of life in which most of these infections occur. Those living in bad hygienic surroundings are undoubtedly more frequently affected, although those living in the best conditions are by no means immune.

The early diagnosis of tuberculosis of the lymph glands is in most cases impossible, except by removal of one of the glands and making microscopic sections, and here it should be remembered that the so-called typical tubercle with its giant cell may not be present. Frequently staining for the bacteria may be necessary to decide conclusively, and in other cases only animal inoculation will prove helpful. On account of frequent infections of the mouth and throat, the lymph glands are frequently enlarged, and there is no clinical method by which we can determine the kind of organism present.

Persistence for several months of the glandular enlargement, the swelling of a gland to the size of a hickory-nut, or the softening of the gland are the main points in distinguishing between tuberculous adenitis and the simple hyperplastic condition. In young children a von Pirquet reaction is of considerable importance but decreases with the age of the patient, since a large proportion of older people will give reaction when in good health.

In differentiating from Hodgkin's disease, the main points are: enlarged glands in other parts of the body, enlarged spleen, and the increase in the eosinophiles; then, too, tuberculosis is more often attended by suppuration. Excision of a gland for diagnostic purposes may be necessary. Differentiation from a dermoid cyst or a neoplasm will probably not give much trouble if these conditions are kept in mind.

Tuberculosis of the lungs is the main complication. Statistics seem to show that more than 20 per cent. of these cases later develop tuberculosis of the lungs. We do not know whether the infection extends through the lymphatics to the bronchial nodes, through the blood stream, or whether these patients are more susceptible to germs inhaled, nor do we know how much the likelihood of acquiring pulmonary tuberculosis is decreased by curing the lymph adenitis. If operative treatment be adopted and the patient's hygienic surroundings are not improved, he is not only liable to a recurrence, but would also be more likely to acquire the pulmonary form. Long continued suppuration of the glands produces bad scarring and may produce miliary tuberculosis by ulceration into a vein, for it should be borne in mind that the glands most often affected by tuberculosis are in contact with some of the large veins.

The old treatment for tuberculous lymph glands was iodides, codliver oil and tonics, and there are physicians today who advocate this treatment. Creosote, guiacol, and their derivatives, creasotal and guiacol carbonate, are recommended here as well as in pulmonary tuberculosis, but they probably have little effect on the diseased glands, except what may come from improving the general condition and digestion. The creasotal and guiacol carbonate are expensive and it is doubtful if the patient absorbs any more of the active drug from them than he could from doses of the drug itself, so small as not to produce disturbances of digestion.

Since the introduction of fresh air and hygienic treatment of pulmonary tuberculosis, this method has been extensively used in glandular involvement with good results, and should always be made a part of any treatment.

Until recently surgery offered the best method of treatment. The objections have been the production of unsightly scars, the danger of injuring nerves, a small mortality which, however, may be nearly neglected, and the danger of recurrence. If operative measures alone are to be relied upon, the operation should be very thorough, the skin flap should be large enough to enable the operator to expose and clean out all the glands, whether they be infected or not. Of course, even with his best efforts, some of the many glands will be left behind and recurrence may take place from this source. Since the probable source of infection is from the tonsil, pharynx or nose, tonsils and adenoids should be removed at the same operation, and any abnormal condition of the nose attended to. Bad teeth may also be a source of infection, and these also should be looked after. Some investigators have found evidences of tuberculosis in many of the submerged tonsils, and in those that have no external evidence of disease, so it is probably better to remove them in all cases of tuberculous lymph adenitis of the neck, particularly if the patient has passed early childhood for, if the tonsil has any function at all, it is in the first few years of life.

The percentage of cures following radical operation are given by Wolgemuth as 70 per cent., Hobel 68 per cent., Von Noorden 62 4-10 per cent., Blos 46 per cent., and Billroth had but 24 per cent. These figures are based upon operations much more thorough and radical than the average operator does, so it will be seen that repeated operations may be frequently necessary. The figures of Charles M. Dowd, of New York City, are more favorable, partly because hygienic treatment has been used more extensively of late, and because some of the cases in his series have been operated upon more than once, and many of them are too recent for valuable statistics.

It is only recently that tuberculin has been used to any extent in tuberculosis of the cervical glands. None of the text-books say much about it; some recent works do not even mention it at all in this connection. If one attempt to follow the technic laid down in much of the literature that comes to his hand, some of his results must be disastrous. A careful use of tuberculin, however, will produce results at least equal to those of surgery.

There are many serial dilutions on the market, and with these dilutions instructions for treatment are sent out; but few patients will stand the increase in dosage recommended in their literature. Many patients are injured by this method of treatment and the use of tuberculin brought into disrepute. It must be remembered that tuberculin deteriorates with age when diluted, and apparently the greater the dilution the greater the deterioration, so that as one goes upward in the series, the dose increases faster than the label on the bottle would indicate, particularly if the weaker solution has been kept in stock for any length of time. Then, too, the use of these dilutions necessitates the use of new bottles frequently and thus frequent changes of size of dose, for this tuberculin is not standardized and, regardless of the label on the bottle, may vary considerably in strength.

In the use of tuberculin, one should make his own dilutions from the concentrated solution, and the weaker dilution should be renewed at least once in two weeks; and whenever a new stock of the concentrated tuberculin is used, it should be given cautiously until you know your patient can stand the same dosage as he had been receiving from a former stock; otherwise occasional severe reaction will be obtained. The most popular form of tuberculin at present is the bouillon filtrate; it probably produces as little reaction as any, and does not need to be shaken before injection. The old tuberculin gives more severe reactions than other forms, and should be mainly used for diagnostic purposes. Good results may be obtained from the T. R., but this must be shaken carefully before each injection, and is more expensive. The main objection to the bacillien emulsion is that it occasionally produces a cold abscess at the site of injection, which is probably due to the dead bacilli contained in it.

Wright and his pupils use small doses and use the opsonic index as a guide. Most others use small injections at the beginning, increasing the dose as rapidly as the patient can stand without producing reaction.

The observations of cases of tuberculosis of the skin or mucous membrane, where daily improvement can be carefully watched, indicates that the best results are obtained by increasing the dosage. No rule can be given as to size of the beginning dose, frequency of repetition, or rapidity of increase, for all these vary with different patients. The only safe method is to make the first dose small enough so that you will not be likely to get a reaction, and here it must be remembered that the reaction will be more severe in mild cases than in those more advanced and extensive.

Unless the process be very active, one may safely begin a dose of from 1/2000 to 1/5000 mg., and, while on small doses, repeat the dose every second to fifth day. In the mild cases the increase must be very slow, while in those of more extensive lesion the increase may be more rapid. As the doses grow larger, the intervals may be made longer, so that by the time one reaches 1/100 to 1/50 mg., the intervals will be about one week. The maximum dose will vary with different patients so much that one can hardly approximate this dose. Some patients who do well never go above 1/50 mg. until entirely cured. Others do well on doses of 1/10 up to 100 mg. It is well to have the patient keep his temperature and pulse record, and bring it with him each time he comes for an injection. He should also be taught to report any feeling of malaise, headache or pains in the bones. Most patients have a reaction, if at all, within twenty-four hours after injection, but in some reaction is delayed for two days.

Glands that are very large and beginning to soften will, as a rule, soften very rapidly under the action of tuberculin. When nearly ready to rupture, they should be aspirated or opened with a very small incision. One need not fear bad scarring in glands that break down under the use of tuberculin, for they do not discharge any great length of time, and heal with a very small cicatrix.

When a case of long standing with discharging sinuses comes for treatment, it is well to use injections of bismuth paste with the tuberculin. Combining X-rays with tuberculin may be helpful in some cases, particularly in those that are discharging and do not respond promptly to tuberculin. However, one must bear in mind that the effects of X-ray and tuberculin on the glands are much alike, and possibly part of the effect of the X-ray is due to increased circulation of the gland and carrying off of tuberculin into the general circulation.

The advantages of the tuberculin treatment over that of surgery are that the patients will more readily submit to this than to surgery, and they are probably less likely to be afflicted later with pulmonary tuberculosis. A patient whose general health improves under tuberculin must be getting rid of all of his tuberculous lesions; consequently one would expect fewer cases of pulmonary tuberculosis following cures by tuberculin than those by surgery. The objection that surgery will produce a scar should not be entertained, for it is of small importance in so serious a disease.

It is probably well, after a patient has been treated with tuberculin until his general condition is good and most of the glands have disappeared, to remove any that are obstinate, through a small incision, for they may later cause a recurrence. Tonsils, adenoids, bad teeth, and a bad condition of the nasal mucous membrane should be looked after here, as well as in those treated surgically.

Common sense is essential here, as in other things, and the man who limits himself to one form of treatment is not worthy of the confidence of his patients. Hygiene, good food, tonics, tuberculin, X-rays and surgery should all be used whenever indicated, for better results can be obtained by combining them than by any one form of treatment. It may be said, however, that hygiene and tuberculin will cure most cases, and that surgery need be rarely used and then, as a rule, only to the extent of opening a suppurating gland or removing one or two glands that will not disappear under tuberculin treatment.

ARTERIO-VENOUS TRANSFUSION BY THE CRILE METHOD.*

(Four Illustrative Cases.)

By C. N. Suttner, M. D.
WALLA WALLA, WASH.

Ore in his monograph describes graphically the various attempts at blood transfusion. That the ancient Egyptians were familiar with the correct technic of blood transfusion may be taken for granted, but it became a lost art as did many other of their accomplishments. The earliest authentic case on record is that of Pope Innocent VIII who, old and decrepit, desired rejuvenation by having a certain Jewish physician transfuse the blood of a young healthy man—thus history relates—and thereby three young lives were lost.

The discovery of the circulation of the blood, commonly attributed to Harvey, but now disputed, became the basis of original investigations along the line of transfusion. While Denys and Emmeretz, in opposition to the Faculty of Medicine of Paris, recognized Harvey's discovery and thus did two successful transfusions, the former using the blood of a lamb while the latter utilized that of a calf, yet ignorance, prejudiced and calumny induced the authorities to suppress its use and thus put it to slumber until 1683.

Often grotesque and bizarre claims as to the efficiency of lambs' blood in the cure of insanity, leprosy, scurvy, fever, etc., were put forth. Thus, in 1683, Surgeon Kaufman is said to have cured a leper by transfusing him with the blood of a lamb.

Michel Rosa, University of Modena, proved by experiments, (1) That a normal living animal can receive much more blood than the system contains; (2) that the blood of an animal of another species can be transfused without danger to life; (3) that exsanguinated animals can be reanimated by arterial blood from an animal of another species.

The work of Blundell in England signalized renewed research and experimentation. His deductions from experiments upon dogs were (1) that blood may be transferred from one dog to another by means of a syringe; (2) that tubes (cannulae) may be utilized in the transference of blood; (3) that venous blood was not superior to human arterial blood in reanimating dogs. In 1835 Bishoff determined definitely that defibrinated blood would not reanimate exsanguinated animals.

In reviewing the literature of the history of blood transfusion one is appalled at the enthusiasm of the early investigators, and the difficulties besetting them from defective knowledge of physiology, pathology and surgical asepsis. The vicissitudes of blood transfusion thus clearly detailed the progress of medical and surgical science. A technic perfected upon a sound physiologic basis, supplemented by asepsis, made it possible to obtain results in this field.

Various methods of blood transfusion are (1) introducing it under the integument of the recipient; (2) into the peritoneal cavity, or (3) directly into the blood vessels, for which blood of similar or dissimilar animals may be utilized, using for transferring it either direct vessel anastomosis by suture, or cannula; or by syringe to regulate pressure.

Crile as well as other investigators emphasized the importance of using similar blood. Ehrlich and Morgenroth proved by experiments how hemolytic action may take place even in similar bloods. In fact it is the most to be dreaded when immediate and prompt action demands the speedy transferrence of blood for therapeutic measures, such as in hemorrhage in postpartum and other conditions. Usually we are unable to perform the delicate hemolytic tests nor have we the time to waste, though we had the equipment and ability. Nor is the final end exact truth as to the cause of hemolytic action of blood sera determined. The pendulum is still swinging back and forth between the respective advocates of the humeral and cellular theory of immunity. Perhaps both sides are correct but are mutually misunderstood in their terminology and interpretation.

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*Read before the Eighteenth Annual Meeting of the Idaho State Medical Association, Boise, Idaho, Oct. 6-7, 1911.

Whenever we are enabled to determine speedily whether hemolysis is a toxemia per se or whether the coalescence of the blood sera of donor and recipient evolve a new poison, then we need not hesitate to employ a therapeutic measure which is of greater value than any hitherto evolved.

I had one case (Mrs. A. N.), resulting fatally from hemolysis which might have been prevented had not its urgency required prompt action. This patient (woman age 32) was attended in her confinement by a midwife. Owing to malposition of the child (O. R. P.), spontaneous rupture of the uterus took place. She was practically exsanguinated when brought to St. Mary's Hospital. Normal saline subdermally continued until the necessary preparations for arterio-venous transfusion were completed. Her husband volunteered as donor. He was apparently in the best of health; no evidence of tuberculosis or other hereditary disease was obtainable. He denied ever having had a luetic lesion. He denied alcohol addiction, explaining his whiskey breath, that he took but one drink to "muster his courage."

The various steps of the anastomosis were speedy and uneventful. Patient gradually returned from extremis to bodily warmth; the cold, clammy perspiration vanished as by magic; labored respiration became normal, the anxious facies were supplemented by a smile; pulse returned and increased in volume. When about a quart of blood was thus abstracted from the donor, his collapse required desisting. Our patient the next morning felt so well that she would have been able to sit up in bed were it not for the clamps which were applied to the uterine tear to control hemorrhage. On the second day, while preparations were being made to repair the uterine tear, evidences of hemolysis manifested themselves. Her condition gradually became more serious, presenting a clinical picture of a speedy, progressive anemia. Chilliness and nausea, scanty urine (hemoglobin stained) with light jaundice within another twelve hours. The jaundice became more pronounced and deeper, not unlike that of hemochromotosis of chronic pancreatic disease. There was no evidence of sepsis. She died on the sixth day after the transfusion. The real causative factor in this unfortunate case of hemolysis became evident when the husband presented himself at my office four weeks after his wife's funeral with a most marked secondary eruption of syphilis.

Many original contributions by Carrel and Cuthrie on direct transfusion by means of suture anastomosis, and of Crile by means of cannula give most reliable and accurate technic to pursue. In transfusion upon the human I have used the cannula method only, whereas in my experimental work on dogs, Carrel and Cuthrie's suture method was employed in order to develop a technic which might be helpful in such emergencies, as when Crile's equipment might be unavailable.

So many factors enter into the management of a successful transfusion that to enumerate all would be impossible in this short paper. Assistants, trained in this particular technic are of first import. A corps of hospital nurses will soon adapt themselves, however, after having assisted at one or two operations. Greater difficulties are encountered when obliged to transfuse at the bedside of a private home, though often the hospital authorities permit the surgical nurses to prepare and assist the operator in critical cases, as did the Sisters of St. Mary's Hospital when Dr. R. C. Coffey did the first successful transfusion in our city upon Mrs. M. A. Shaw.

Firm assurance as to the painlessness, the benefit to be derived and absence of fatalities to both donoı and recipient ought to be given. An air of confidence and quietude should be maintained. Mysterious whisperings and doleful looks are as much to be avoided as noise, hurry and bustle. Every arrangement of position to be so as to give comfort to donor and recipient, as well as freedom of action to operator and assistants. Morphin, gr. 1/4, (without atropin) should be given hypodermatically to both donor and recipient about 30 to 40 minutes before operation.

When operating with patient in a low bed, wooden blocks of sufficient height had best be placed to prevent a cramped or strained position to operator and assistant. Arrange arms of donor and recipient so as to give easy access to vessels to be anastomosed. The median basilic vein of the recipient is usually the most accessible and of proper size, although I always found the radial vein satisfactory. I found a sol. of cocain 1/10 of one per cent. with adrenalin m. v. (1-1000) sufficient as a local anesthesia in the recipient, but not in the donor; here one per cent. is much more efficient. All important is good light, especially when artificial light during night transfusion is to be employed. Shadows are then truly cast before coming events.

Dissecting and isolating the donor's radial artery for 3 1/2 c. m. and ligating small branches is perhaps the most difficult of the work, particularly when the artery is deep seated and the donor muscular or very fat. Ligation of the distal end and placing Crile clamp gently on proximal end, the artery is cut squarely beyond the silk ligature while the adventitia is on as much traction as possible. This is all important as the availableness of the intima is not only necessary in slipping it over the venous cuff, but obviates any roughness capable of thrombus formation. This completes the first step.

The identical method in dissecting the vein is carried out. Hold the handle of the cannula by means of a hemostat and pass end of the vein pulled through it by means of needle with fine suture tied to end of vein. This suture may be left in situ and two more placed equidistant for traction in cuffing vein; mosquito forceps are better, however, if at hand. Then ligating cuff with fine linen in groove nearest canula handle, and applying sterile vaselin to facilitate slipping on of the artery, which is tied in the vacant groove, completes the second step. Warm normal saline solution by sponges is constantly applied from beginning to end of a transfusion. Gently releasing both Crile clamps presents a radical pulse extending several inches up into the vein, if the technic was carried out correctly.

Though the technical work in transfusion is difficult and painstaking, yet it fades into insignificance when compared with the problem of hemolysis. Exultation over prospective victory over death, in perceiving reanimation of a cold and sweaty form, as the life-giving fluid rushes with a thrill and throb into and along the empty vein, may be but brief and fleeting. Danger of acute heart dilatation may be guarded against or, if manifesting itself, desisting from transfusion and proper rest and heart stimulants applied; but a blood once transfused capable, by its toxic action, to precipitate the red blood corpuscles can only be guarded against by careful examination of probable donors and careful hemolysis tests, whenever means and time are at our command.

Transfusing from vein to vein has quite recently been advocated. Although a shortening of technic may thereby be accomplished, yet blood vastly inferior in quality to that of arterial is instilled and certainly cannot produce prompt therapeutic results.

Direct transfusion of blood is not a panacea as at first believed by over-zealous advocates. It has been thoroughly tested in the various anemias not due to hemorrhage and found wanting; in malignant disease it is likewise ineffectual; so also in chronic suppurative troubles, and exophthalmic goitre.

Its usefulness after hemorrhage, postpartum or otherwise, in shock and collapse if due to the anemia of hemorrhage, whether acute or pathologic, is life saving. A bad surgical risk may be changed into a safe one. Its clinical field no doubt will broaden as the physiologist and pathologist prepare the way.

The four cases given as illustration were successful as to technic, but two really saved life,—one death being caused by hemolysis on the sixth day. In the other (transfusion in typhoid hemorrhage) death followed profound exhaustion on the fourth day after transfusion.

Three attempts at transfusion were undertaken but not successful. One was for hemorrhage and shock following extirpation of a septic uterus, ruptured during labor, her husband, a physician, acting as donor. His radial artery was too small and before the necessary preparations for a more accessible artery could be made the patient was dying. In the second failure, the intense nervousness of the donor, a preacher, prevented slipping on of artery. Not only did his teeth rattle, but his whole body shook as with the ague.

In the third, Mr. J. A. D., a laborer, during the alfalfa harvest in the summer of 1909, fell from a hay-mow onto a derrick pole, lacerating his right kidney obliquely and severing renal artery. Rapid removal with application of clamp to renal artery and speedy preparations for transfusion were made. The fellow laborer who consented to act as donor requested to be excused for a few moments. Thinking he had perhaps developed a sudden polyuria, we waited, in the meantime giving infusion of normal saline. The donor has as yet failed to appear. Our patient recovered and is in perfect health.

Case 1. Mrs. C. D., age 51. Hemorrhage for past four years considered harmless by husband, only a mere incident of the change of life. When called in consultation woman was practically exsanguinated; uterus contained two large fibroids; transfused at her home, husband acting as donor; the second day removed 28 miles to St. Mary's Hospital, and hysterectomy performed. Recovery uneventful.

Case 2. Mrs. A. N. Hemorrhage from ruptured uterus, detailed above. Death from hemolysis.

Case 3. Mr. A. W., age 27, R. R. laborer, compound comminuted fracture of left femur and rupture of femoral artery. Artery ligated and leg wrapped in moist normal saline dressings. Transfused successfully and leg amputated at hip joint the following day; patient recovered.

Case 4. Anton Z., age 32, laborer. Hemorrhage of typhoid; failure at success with the usual remedies after six days trial, and all the signs of a rapid dissolution imminent; a fellow laborer volunteered as donor. The transition to life and apparent recovery was marvelous. At the end of four days recurrence of bleeding and death.

THE PROTEIN REQUIREMENTS OF MAN.*

By Chester J. Stedman, M. D.,

PORTLAND, ORE.

In preparing this paper it has not been my intention to present an exhaustive and critical treatise, but rather, by a general consideration of the subject, to invite a more earnest and painstaking attention to the very important problems of protein metabolism.

A suitable and acceptable diet for mankind has been the subject of much consideration since the earliest times, and many and various have been the theories advanced by those who believed they had arrived at a satisfactory solution of the problem. During recent years one enthusiast urgently recommends the eating of but one meal a day, while another would eat six meals during the same period. On one hand we hear that a rare beef and hot water diet is a certain and positive renewer of youth and annihilator of infirmity, and on the other hand that a diet of fruit and nuts is the only perfect one; others advocate just as strenuously a diet of buttermilk, and again we hear that nothing will so readily restore and perpetuate bodily vigor as an entire abstinence from all food for a period of days or even weeks. However, even among the ranks of competent investigators who have endeavored to fix upon a rational and normal diet for man it must be admitted that much of the attention bestowed upon this subject has been confined to a consideration of the existing dietetic customs and tastes of mankind, rather than to a careful determination of his actual necessities: for man, as we well know, has an acknowledged ability for convincing himself that those things which he most desires in this life are at the same time those which he most urgently needs.

Before accurate investigation had classified our foodstuffs into protein, fat, carbohydrate, inorganic salts and water, and given us a fair idea of the functions fulfilled by these various elements within the body, any consideration of dietetics was necessarily of a more or less general nature. But with the advances which have gradually been made in general and biologic chemistry, there has come a clearer understanding of the composition and relative importance of our various food products; and at the same time our knowledge of the transformations which the individual food elements undergo, while being utilized in the animal organism, has been materially extended and simplified. However, much still remains to be learned of the more intricate problems of metabolism; and until we have reached a satisfactory solution of these problems it is well to heed Prof. Chittenden's warning, namely, "That a reasonable variety in our daily fare is desirable, not so much on account of what we know, as because of what we don't know!"

Since the development of a more accurate knowledge of foods and nutrition, certain investigators have devoted much time to endeavors to ascertain the actual daily food requirements of the average normal man, and especially the relative proportion and amount in which protein, fat and carbohydrate should enter into this daily diet. The protein, or nitrogenous component of our food has long been recognized as being by far the most important of the organized food elements; it appears to be the absolutely essential constituent of the animal cell, without which life is impossible. Animals fed on a protein-free diet, regardless of the amount and variety of other food provided, soon sicken and die; and human beings partaking of protein-free food for limited periods have soon developed symptoms of weakness and malnutrition which made a return to protein food absolutely imperative.

In the light of our present knowledge it seems quite possible for both man and animals to live without fat for considerable periods, and at the same time to maintain a high degree of health. And with certain limitations, the same may be said of carbohydrate, for the protein molecule contains a carbohydrate element in combination with its nitrogen, which may be more or less readily utilized by the organism. However, a high content of fat in the dietary, together with an absence of free carbohydrate, seems with certain individuals to give rise to symptoms of intoxication, or acidemia, which make the further continuance of such a diet undesirable.

This particular form of acidemia is often well illustrated during the treatment of diabetes mellitus, when carbohydrate food is being rigidly withheld: the poisonous acid bodies—B-oxybutyric, etc.—which accumulate in the system in such cases are believed to arise largely from an imperfect combustion of fat. As one investigator has fancifully expressed it, "The fat burns best in the flame of the carbohydrate." Nevertheless, certain races of men, as well as certain animals, seem able to adapt themselves to dietaries from which free carbohydrate is practically absent, and yet no evident bad results ensue.

The role of the inorganic salts in our dietary is as yet but imperfectly understood but, in the light of gradually increasing knowledge, it is believed that the presence or absence of these bodies may exert a very considerable influence upon the processes of metabolism.

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*Read before the Portland City and County Medical Society, Portland, Ore., Dec. 21, 1910.

In assigning a relative importance and proportion to the three organized food elements, investigators have been largely guided by the established dietetic habits of mankind, as determined by the quantity and character of the food consumed by large numbers of people, unrestricted as to their choice of dietary, and living under varied conditions of climate and activity. Many races of mankind, and particularly the more progressive, have been flesh eaters since the dawn of history—often from necessity but usually from choice. The peculiar aroma and flavor of tastefully-cooked meats are undoubtedly very pleasing to the average human palate; and this feature of taste must be at least partially responsible for the very considerable and widespread consumption of meat foods. It is a significant fact that the substances to which meat very largely owes its pleasant and attractive flavor are very closely related, chemically, to those compounds which give to coffee, tea and cocoa their peculiarly agreeable and mildly stimulating properties: hence we are enabled to regard the meats not only as a food, but also as a mild stimulant which tends to satisfy some obscure craving of the very susceptible human organism.

As a rule it has been the flesh-eating races which were available for more or less accurate observation; and as a natural consequence most investigators have given the protein element a rather conspicuous position in the so-called normal diet. The latter, as usually understood, is that food-combination which will maintain in bodily equilibrium an average adult man weighing 150 pounds and performing moderate muscular labor. The daily protein requirement for such a man, according to C. Voit is 18 gm.; Atwater, 125 gm.; Schmidt, 105 gm.; Hultgren and Landergren, 134 gm.; and Forster, 131 gm.; together with from 50 to 125 gm. of fat, and sufficient carbohydrate to bring the total energy value rather above 3000 gm. large calories. As we have already seen, the fat and carbohydrate components are not freely interchangeable in the diet, although, within certain limits, they may be considered so.

The Voit standard, including 118 gm. of protein—of which 105 gm. should be absorbable—seems to have been the most generally accepted, and its use by the average man entails the daily metabolism of over 16 gm. of nitrogen. By far the largest portion of this 16 gm. of nitrogen, absorbed daily from the intestinal canal, is thrown out through the kidneys as urea, which constitutes as a rule from 80 to 85 per cent. of the total nitrogen content of the urine, the remaining urinary nitrogen being ordinarly represented by ammonia 4 to 5 per cent., uric acid about 1 per cent., creatinin 3 to 4 per cent., with small and variable quantities of minor and partly undetermined compounds.

By placing human individuals for brief periods upon a practically nitrogen-free diet, of ample calorific value, Prof. Folin has observed some very interesting changes in the proportions borne by these various nitrogenous compounds to the total quantity of urine nitrogen. For instance, with a total nitrogen output of 3.6 gm. (instead of the so-called normal 16 gm.), urea nitrogen made up only 60 per cent. of the total; whereas ammonia had risen to 11.3 per cent., uric acid to 2.5 per cent., and creatinin to 17.2 per cent.; with a residual nitrogen of practically double the proportional amount usually found.

Folin's observations led him to the conclusion that, while the excretion of urea depends largely upon the nitrogen content of the diet, that of ammonia, uric acid and creatinin is more constant—marked constancy for the same individual being especially noted in the case of creatinin. This naturally suggested that the latter compounds are more or less closely associated with the vital processes of metabolism, while the urea represents, at least to a certain extent, a safety valve through which the system, by virtue of the activities of the liver, is enabled to rid itself of that portion of the food nitrogen which is ingested in excess of the actual demands of the organism. In this connection there seems to be reasonable ground for believing that a considerable proportion of the amino-acid compounds, which result from the intestinal digestion of protein, are carried directly to the liver by the portal circulation, their nitrogenous component transformed into urea and promptly excreted without ever having entered into the vital metabolism of the body at all. The close relationship which has long been noted to exist between the ingested and excreted nitrogen, in individuals consuming an ample calorific diet, strongly corroborates such a view. Prof. Folin's observations would appear to have been confined to rather brief periods, and while consequently not convincing they are at the same time very suggestive; but the most obvious inference we may draw therefrom is that it is possibly not necessary for the average man to eat 118 gm. of protein each day, with its 16 gm. of absorbable nitrogen.

In order to test the feasibility of a lowered protein intake for the average human being, Prof. Chittenden undertook a series of observations, extending over many months and involving numerous individuals who represented various degrees of physical and mental development and activity. And the result seemed to amply prove that not only did these individuals retain their physical and mental efficiency upon dietaries containing from 50 to 75 gm. of protein, but that they were actually benefited by the experience; and many of them chose to continue the low protein dietary indefinitely. A very remarkable feature of these experiments was the considerable gain in actual strength, as well as endurance, which was experienced by the subjects. This was not only true of men who had been previously unaccustomed to regular gymnastic training, but was also very noticeable in the case of several college athletes, men who were in the very pink of physical condition at the beginning of the experiment, and the only change in whose daily life consisted in a very marked reduction of protein food. As a result of his observations Prof. Chittenden has been led to suggest 75 gm. of protein as representing a perfectly safe minimum daily allowance for the average human individual.

In some quarters Chittenden's work seems still to be patronizingly looked upon as a scientific curiosity of little practical value: by others his views have been urgently condemned as being not only extreme and unwarranted but actually dangerous. Colonel Woodruff, speaking from the standpoint of a military hygienist, feels convinced that the liberal allowance of protein in the recognized dietaries is none too large for men who are subject to the severe and prolonged exertion incident to military campaign. But we must reflect that many customs and agencies, now of proven and sterling worth, have met with bitter denunciation at the time of their introduction; for man is a creature of habit, and dislikes to have his cherished ideals too suddenly shattered.

With a reduction in the quantity of protein in the diet, it is of course necessary to maintain the requisite calorific value by means of sufficient fat and carbohydrate; and failure to maintain nitrogenous equilibrium on a low protein intake, which has been reported by various investigators, has unquestionably at times been due to the burning up of body tissue, in the absence of sufficient carbonaceous food to meet the energy requirements. Prof. Liebig believed, as a result of observations which have since been proven erroneous, that the combustion of protein was an absolute essential in the maintenance of muscular activity, and consequently the more labor performed by the individual the more protein he must consume; and even today we find the belief very general that men performing hard labor must eat an abundance of meat. It is now definitely known, however, that carbohydrate is a much more adaptable and economical source of muscular energy than is protein; and that when carbohydrate is supplied in adequate quantity, hard muscular labor is not attended by a noteworthy increase in nitrogen elimination.

There is an especial importance attaching to the determination of the smallest quantity of protein food upon which the body may safely maintain physical and mental efficiency. Fat and carbohydrate, in the course of their utilization by the body, are normally burned up to form water and carbon dioxid, which are both readily excreted by the lungs, kidneys and skin. The products of protein dissociation, however, are not so easily eliminated by the system; and we have reason to suspect that the ingestion of unnecessary quantities of albuminous food throws a heavy, and at the same time gratuitous burden upon the liver and kidneys. We know that in chronic rheumatism and gout, especially, the tissues contain deposits of protein decomposition products which the organism has evidently been unable to eliminate; and we know, too, that a reduction in the intake of protein, particularly nucleoprotein, will often bring relief in these cases.

Further, the putrefactive changes in the lower intestinal canal are undoubtedly dependent upon the bacterial decomposition of nitrogenous compounds which the absorptive mechanism has not taken up, and which were, presumably, in excess of the real needs of the body. And there is absolutely no question that the various products of putrefaction, circulating in the blood, are of decided disadvantage to the system. Apart from the physiological aspect of the low protein dietary, it is a question of considerable economic importance. Protein foods, as a rule, are expensive foods; and if it be established that a lessened proportion of albuminous food may be safely eaten, there are many among the poorer classes of our population who may live not only more cheaply, but actually to better advantage than is now often the case.

Personally, I have lived for considerable periods upon a dietary the calculated protein content of which varied from 40 to 60 gm. per day, and have been unable to detect any ill results whatever from such practice. And I believe we may well question whether the older dietary standards, as regards the protein component of our food, really represent the physiologic needs of man.

608-609 Oregonian Building.

ANAPHYLAXIS.*

By Samuel A. Owens, M. D.
SEATTLE, WASH.

My attention was directed to this subject through being called upon some time since to attend a man suffering from a severe attack of diphtheria, who informed me that eighteen months previously he had been in quarantine for three weeks in his home in Spokane while one of his children was sick with the disease, and he had at that time received an immunizing dose of diphtheria antitoxin. He was unable to state what quantity had been administered, but said his physician had mentioned when giving the injection that it was merely a preventive dose.

I administered 6,000 units of antitoxin, and am frank to confess that I gave the matter of a previous use of the serum greater consideration after what very soon followed, than I had been inclined to do before, as two hours later the nurse telephoned me to come to the patient as soon as possible. She informed me upon arrival that he had been complaining of severe headache for about an hour, the temperature had increased from 102.6° to 104°, pulse from 120 to 140, and a few moments before she telephoned he had suddenly become very pale and was having considerable embarrassment of respiration. As I began to look the patient over he was seized with violent dyspnea and became unconscious, remaining so for thirty-five minutes.

I immediately administered ether, m. xxx, hypodermically, followed a few minutes later by atropin, gr. 1/75. With these and other emergency measures, respiration soon improved, the heartbeat became more steady, and consciousness soon returned. An hour later the temperature had fallen to 103°, the pulse to 120, the former flush returned to the face and respiration continued to improve until, two hours after return of consciousness, it was free from embarrassment. Severe headache persisted, however, and several times during the day there were violent attacks of urticaria, wheals from the size of a silver quarter to that of a man's hand scattering over the body, lasting from a few minutes to an hour or more, appearing and disappearing with great rapidity. After twenty-four hours more all symptoms caused by the antitoxin treatment had subsided, those of the disease were much improved, and an uneventful recovery followed. The patient informed me that there had not been the slightest disturbance following the former treatment, which very clearly demonstrates that his present attack was due to hypersensitiveness to the serum, created by the initial injection.

The phenomenon of anaphylaxis was discovered in 1903 by Dr. Theobald Smith, who observed that the guinea pigs he used for standardizing horse serum suffered severe or fatal symptoms when used for this purpose a second time. On the occasion of a visit to this country by Paul Ehrlich, in 1904, Dr. Smith made him acquainted with the nature of his discoveries and upon his return to Germany, Ehrlich induced Otto, one of his pupils, to undertake a systematic study of the subject, and upon publishing the results of his work, this investigator designated the fact of hypersusceptibility as the "Theobald Smith phenomenon."

The bibliography is of great volume and often confusing, owing to the wide divergence of opinion among various investigators on certain features, which seemingly would not admit of disagreement. It is conceded by all, however, that our present knowledge of the subject is only in its infancy, and that the discoveries of the next few years will solve many problems which thus far have been confined to the realm of speculation. The term anaphylaxis was proposed by Richet, and comes from the two Greek words "ana" against, and "phylax" a guard or protector, and signifies, clinically, a hypersensitiveness of the organism to an agent which upon its primary introduction into the system gives no manifestations of any reaction.

The reaction is of two characters, immediate and accelerated. The first may appear within a period varying from a few minutes to several hours, and is indicated by a train of symptoms embracing erythema, urticaria, nausea and occasionally loss of consciousness in the milder exhibitions, and in the more aggravated forms hyperpyrexia, swollen lymphatics, joint pains, albuminuria, bloody stools, dyspnea, convulsions and profound collapse terminating in death, or death may follow the injection instantly without warning.

The accelerated form may present any or all of the symptoms of the immediate but does not appear until within from twenty-four to forty-eight hours and up to the fifth day, or possibly as late as the seventh day following the injection of the serum. All of the symptoms may occur in a given case or they may be seen in various combinations, and those most prominent in one case may be lacking in another, the difference lying in the susceptibility of the individual, and not in the toxicity of the serum.

To observe the reaction experimentally, first a minute quantity of the serum is injected, according to Adami[1], of even so small a dose as 1-100,000 gm. if a guinea pig be used, and after ten or twelve days follow with a second moderate dose, say 5 cc., when, depending upon the form of the reaction manifested, within a few minutes to two days a train of violent symptoms will declare the anaphylactic condition, and in the great majority of experiments will terminate in the death of the animal. Commenting upon the phenomenon, Adami, remarks that if, in the initial treatment a full curative dose be used, no such results will follow the secondary injection. Supporting this view he cites the work of Rosenau and Anderson, two investigators who have made the most extensive study of the subject and whose first reports were published almost simultaneously with those of Otto, to show that of 19 deaths, which they had tabulated up to 1906 following primary injections of the serum, the majority of these had occurred in the cases of asthmatics or in persons of inherent susceptibility to the odor of horses[2]. Of 15 cases of death following primary injections, tabulated by Gillette, he reports that 9 were asthmatics[3], and in some of them the serum had been employed empirically, in a vain hope that it might favorably influence asthma. The period of susceptibility in the human subject has been observed in one case to extend through a period of seven and one-half years.

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*Read before King County Medical Society, Seattle, Wash., Mar. 20, 1911.

From an examination of many reports it appears that attacks of urticaria, erythema, nausea and occasionally loss of consciousness following administration of the serum is more frequently seen among physicians and nurses who have at some prior time received immunizing doses, than among patients receiving full protective doses for the first time. Dr. S. J. Meltzer, of New York, in a paper on this subject[4], points out that, as certain diseases as for instance whooping cough and typhoid render the patient less susceptible to future attacks of these infections, and in other diseases as in erysipelas and possibly pneumonia more susceptible to recurrent attacks, in like manner in one case where the injections of non-fatal doses of toxins as of diphtheria or tetanus is a protection against the specific infection, in exceptional cases this treatment may produce the reverse of immunization and, instead of insuring protection, the repeated injections may render the subject hypersensitive to the toxin.

Accepting the often demonstrated fact that persons subject to asthma should not be injected with horse serum, it remains for us to consider the extreme susceptibility in yet a few other individuals who give fatal reactions following primary injections. We have already remarked that of this latter class, in the cases of the reported deaths investigated by Rosenau and Anderson and by Gillette, some were subject to hay fever and others were strongly susceptible to the odor of horses.

While the manner in which this susceptibility was acquired would not properly have a place in this paper, I digress for a moment to introduce a relative sidelight contained in a recent article by Leonard K. Hirshberg, of Johns Hopkins[7], in which he considers the hypersusceptibility of certain people to shell fish, berries, mushrooms, tomatoes, and eggs or other articles of food; and following the ingestion of the particular food to which they are sensitive, they are immediately subject to attacks of urticarial rashes, sick headache, nausea, and vomiting, all more or less violent according to their respective degrees of sensitiveness. It is his assumption that just as the initial stage of anaphylaxis occurs in a subject after injection of some specific protein without outward manifestation of its effect, the proteins of these different foods have gained access possibly by the invasion of food or through the respiratory tracts of the susceptible hosts, and sensitization occurring, they are rendered anaphylactic to future exhibitions of food containing these proteins. These sensitizations, as in the cases of experiment to be noticed a little later, are specific; the subject exhibiting anaphylaxis to berries or tomatoes is not sensitive to eggs, shellfish, mushrooms or vice versa.

Vaughan and Wheeler by many experiments have established the fact that this same principle obtains among herbiverous animals[1], and report that the reaction will be observed following the infection of their food with the derivative of the proteid upon which a test is desired. They have shown further that the blood of animals so treated and sensitized contains a substance which, if injected into other normal animals of the same species, sensitizes them and that upon giving birth to offspring, these will also be found to react in the same manner as the animals originally infected.

Explaining this phenomenon, Vaughan finds that the proteins of egg-albumin, for example, selected on account of its apparent innocuousness, is composed of two units, toxic and non-toxic. The toxic element of one egg, if injected into the peritoneal cavity of a rabbit, will kill the animal as promptly as injections containing the proteins of colon or typhoid bacilli; while the whole whites of three hen eggs so injected will produce no untoward symptoms. Sensitization to egg-albumen is accomplished either with the unaltered albumin or with its non-toxic portion only, but the non-toxic element has no property of sensitizing to itself alone. The toxic portion cannot sensitize either to itself or to the unaltered albumin.

Adami's understanding of these phenomena is that, when a foreign protein is introduced into the organism, the cell substance attracts the non-toxic element and becomes habituated to attracting this portion, and after ten or twelve days when toleration or immunity has become established, and the foreign protein is again exhibited, the cells actively absorb the nonpoisonous portion, liberating the toxic moiety in the body fluids which, upon entering the blood circulates to the brain, and there sets up the disturbances particularly in the respiratory centers which lead to death[1].

Immunity to the anaphylactic reaction may be conferred by giving repeated increasing doses of the serum during the period of incubation and it is emphasized that this precaution must be observed if the undertaking is to be successful. The fatalities attending injection of the serum have been proved to be a small fraction of one per cent.[5] and the great majority of physicians have had the good fortune to be spared the unhappy accident of fatalities and the more serious sequelae sometimes following its use. Writing on this aspect of the subject W. L. Moss, of Johns Hopkins, reports his observations with the following tests in thirty cases[6]. After cleansing the skin of the inner side of the upper arm and drying with a sterile sponge, he injected .01 cc. of normal horse serum intradermally. If the subject be anaphylactic a reaction consisting of an inflammatory area 1 to 2 cm. in diameter will appear within twenty-four hours and disappear in two or three days. In some cases it has occurred and disappeared within twenty-four hours, so that an observation should be made within ten hours after injection. The reaction is entirely local. Of the thirty subjects tested nine had never received serum treatment in any form and their reactions were negative in each case.

The remaining twenty-one had received antitoxin from four months to ten years previously, ten of whom gave positive reactions and eleven negative. The length of time between their initial treatments and the testing period seemed to have no influence on the reaction. Of the ten positive reactions, three were more marked than the others, and he believed that these exaggerated reactions were an index of anaphylaxis in the subjects and further treatment in their cases was withheld. Dr. Moss adds, however, that it is in these very cases that the value of the test will eventually be proved and urges that, where death from diphtheria is imminent in subjects who have received primary immunizing treatment, the heroic dose should be administered and results reported through the medical press for the information of the profession. It has been suggested that, where the serum is to be administered in suspicious cases, the treatment be preceded by atropin hypodermically, in amount suitable to age of patient, and long enough in advance that the full physiologic effect may be in operation when the serum is introduced.

Anyone wishing to pursue this subject further will find a most interesting and exhaustive study of serum disease and anaphylaxis, with tabulations and analyses of many cases, in a paper by Dr. George H. Weaver, of Chicago, read before a local medical society in 1909 and published in Vol. II, Archives of Internal Medicine.

CONCLUSION.

Hypersusceptibility is increased by repeated dosage, and is now more likely to be encountered by reason of almost universal usage of the serum for immunizing purposes than formerly, and it is, therefore, the duty of the physician to ascertain in every case before administering treatment, if his patient has had a prior injection, and to inquire as to history of asthma and hay fever.

Hypersensitiveness is markedly influenced by the amount of serum used, making it advisable to employ the highest concentration of antitoxin, in the smallest quantity of serum obtainable.

As in the hypersensitive subject the serum produces a more profound effect if injected directly into the circulation, precaution must be taken to avoid passing the needle into a blood vessel.

And, finally, if the study of anaphylaxis should prejudice any physician against the use of antitoxin, he has only to reflect that for every death chargeable to the serum, a great number of lives have been saved which without it would have been lost; and that if the occasional fatal results attending its use were hopelessly unavoidable, it would still be a small exaction in comparison to the priceless boon its discovery has proved to humanity.

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HYDATID CYST OF THE LIVER.*

By Otis B. Wight, M. D.
PORTLAND, ORE.

Hydatid cyst of the liver is a very rare condition in this portion of the country, therefore I wish to present the history of a case recently seen and operated on, with a brief survey of the literature, hoping to develop free discussion including report of other cases, which may have occurred in the practice of members of this society.

History—F. Lopez, aged 33, Italian laborer, in United States eleven months. Previous health good and no history of possible infection. Three or four years ago a dull pain was first noticed in right side, which was so severe on five or six occasions that he had to stop work for a day or so. Present illness dates from March 20, 1911, when this pain in right side developed and became severe enough to send him to bed. Seen first on March 24. Small, swarthy Italian. Gives no history of nausea, vomiting or any digestive disturbance. Has never had constipation, diarrhea, jaundice, or urinary symptoms, and denies venereal disease.

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*Read before the Spokane County Medical Society, Spokane, Wash., April 27, 1911.

Examination—Spare, somewhat pale; temperature and pulse normal; no jaundice; chest negative. Liver dullness extends about two finger breadths below costal margin in midline and about five in mammilary line. An indefinite mass is felt in the right hypochondrium, which is slightly dull on percussion, is elastic and slightly movable, about the size of a grape fruit, and decidedly tender on pressure. Patient sent to hospital for exploratory operation.

Operation—Under anesthesia mass was found to be much larger, extending about three inches below costal margin, and from anterior axillary line to within an inch of midline, and was firm and elastic. Incision made through right rectus muscle from level of navel to within one inch of costal margin. Edge of liver presented in upper part of incision. Mass was found to be connected with edge and under surface of the liver for about six inches, and definitely adherent to it. The colon was displaced and found lying diagonally across and over the inner side of tumor. The only adhesions that were present were a few slight bands between tumor and kidney, which were easily separated. The kidney, stomach, intestine, and gallbladder showed no abnormal changes on examination. The liver was apparently normal otherwise.

Owing to size, regularity of wall and color, probable diagnosis was made of sarcoma, and it was considered unwise to attempt removal of growth, considering condition of patient and marked adherence to liver. To make correct diagnosis it was decided to remove a small piece of the growth. In so doing cyst was punctured and a little fluid and a few cysts escaped which established diagnosis. This was also confirmed by microscopic examination during operation of contents of one of the small daughter cysts, when characteristic hooklets were found. Abdominal cavity was walled off with gauze, incision in cyst enlarged and by pressure over liver and abdomen a large amount of fluid was obtained, containing some colloid substance and a tremendous number of daughter cysts varying in size from one-eighth to one and a half inches in diameter. The cyst cavity was irrigated, explored with finger and also lightly curetted to ensure complete removal of cysts and brood capsules, 1-2000 bichlorid being used. As the cyst wall lay immediately under the peritoneum they were not sutured together, but a rubber drainage tube was inserted with gauze packing about to prevent leakage. Abdominal wall closed in layers with catgut and several stay sutures of silkworm gut. The cyst contained at least a quart of fluid and daughter cysts.

Postoperative—Patient was quite ill for two or three days following operation, but since then has gradually improved. On two or three occasions for a day or so at a time temperature has risen to 101-2° in the afternoon, but this has always cleared up by catharsis, and at no time has pus been found or other signs of suppuration. For the first three or four days the discharge was clear, thin and contained a few small cysts, but none have appeared since April 3. About March 29 the character of the discharge changed and since then has been bile-stained. The tube was removed on April 3. From date of operation to April 15 drainage was so free that the dressings had to be changed at least twice daily, but since then it has gradually decreased in amount. Patient has had practically no pain since operation and the tenderness over liver and tumor has disappeared. He is now up and around ward most of the time. Liver dullness now reaches one finger breadth below costal margin from mid-line to axilary line. Hemoglobin, 70 per cent; red blood cells, about 4 million; leucocytes, 12,500; no eosiniphilia.

Echinococcus or hydatid disease has been found in practically all countries, principally in Iceland, Australia, Argentine Republic, and portions of Germany. In recent years numerous cases have been reported in Canada and the United States, but most of these have been imported, though the parasite has been found on this continent. The adult tape worm, taenia echinococcus, is found in the upper intestine of dogs, wolves, sheep, cattle and hogs; man is only an accidental host. The adult worm is from one-eighth to one-half an inch in length, has three or four segments, the terminal one alone maturing and producing ova, usually about 5,000. The head has four sucking discs, and a double row of hooks, from 20 to 50. The worms resemble small white threads attached to the intestinal villi and may be easily overlooked on macroscopic examination. The ova are not as resistant to unfavorable conditions as those of the common human tape worms; are ingested through contaminated water or from soiled hands. If ova are swallowed, the covering membrane is digested and the six-hooked embryo burrows through the intestinal wall and is usually carried by the blood stream to the liver, more rarely locating in the lung, intestine or kidney. Wherever it lodges it develops very slowly, the hooklets disappear, and the embryo gradually becomes surrounded by two layers, an external laminated, chitinous membrane and an inner granular layer. Outside of the cyst there is developed a fibrous envelope from the tissues of the host.

The growth of the cyst is very slow and may take several years to reach size of an orange. As the cyst enlarges, proliferation of tissues takes place in the inner layer of the cyst, the formation of so-called daughter cysts. These separate early and float free in the fluid, and may in turn give rise to grand-daughter cysts. From the lining granular membrane of daughter and grand-daughter cysts develop buds which form the brood capsules or scolices containing sucking discs and rows of hooklets. The scolices, if ingested and taken into the intestines of dogs, swine, etc. will produce the mature tape worm.

This is the usual history of development. These daughter cysts or brood capsules may also penetrate the cyst walls and pass into the surrounding tissues, forming exogenous cysts. Or rarely the daughter cysts may be separated from one another by connective tissue formation, within the cyst wall proper, the so-called multilocular variety. The last two are rarely found in man but quite common in some animals

It is difficult to give statistics as to the prevalence of this disease in this country, but in certain areas colonized by Icelanders and Germans a considerable number of cases have been reported. In Iceland from one to two per cent. of the inhabitants are said to be affected, and from fifteen to twenty-five per cent. of the dogs. In portions of Australia the mortality record show from three-tenths to two per cent. due to hydatid disease.

The cyst may continue to grow for several years. It has been reported present over twenty and may reach the size of an adult head or larger, and weigh from twenty to thirty pounds. It usually produces symptoms from pressure, but the contents may die and change into a granular, putty-like material and become calcified. In these cases the cause of degeneration of the scolices inside the cyst is probably not from pressure within the cyst wall, due to the presence of fluid and of the daughter cysts, but rather to changes in the connective tissue capsule as this becomes so fibrous that the blood supply is cut off.

Location. In some 2,000 cases reported over the world, the liver has been involved in more than 50 per cent., usually the right lobe; the intestinal, respiratory and the genito-urinary tracts, each about 10 per cent. It is rare in spleen, brain and spinal cord.

Contents. The fluid contained in the cyst is usually clear, sp. gr. 1005-10, does not contain albumin but chlorides always and usually sugar, may show scolices or loose hooklets under the microscope. Hooklets can be found in the fluid of daughter and grand-daughter cysts, and are the only absolute means of diagnosis.

Symptoms. These are usually result of pressure and vary according to location of cyst, and are referable to a slow growing tumor. Weight in the side, dragging pain, constipation from colonic displacement, gastric disturbances from pressure upon or change of location of pylorus, pain on deep breathing when cyst is situated high up against the diaphragm. Tumor is not seen early but when it does appear shows below the ribs, with extension downward, and there is usually change of line of liver dullness. Palpation gives rather tense elastic tumor, moving slightly on respiration, rarely fluctuating or tender, which may present so-called hydatid fremitus, as if a mass of quivering jelly were present.

When suppuration occurs with attendant fever and sepsis, the picture changes and diagnosis should be more certain, providing tumor has been noted previously. The cyst may rupture into lung with sudden development of cough and large amount of sputum, in which hooklets and cysts may be found, and is often fatal with development of bronchopneumonia, or pyopneumothorax. It may rupture into peritoneal cavity when death may ensue from peritonitis if infection be present, or else a slow generalized echinococcic involvement of peritoneum will occur.

Urticaria has been mentioned as a rare symptom in hydatid disease. It is apparently due to absorption of toxins from the cyst and usually disappears when it is evacuated. It occurs quite often when the cyst is drained and some of the contents leak into peritoneum, thorax, etc., or where cyst ruptures internally. In such cases it is often severe and may last indefinitely.

The heart may be markedly displaced and seriously embarrassed by presence of a large cyst on the upper surface of the left lobe.

Diagnosis. In countries where this disease is common, diagnosis is frequently made before operation, though cancer, sarcoma, gumma, or amebic abscess of the liver must be considered, as well as hydronephrosis, dilatation of gallbladder and pleural effusion. It differs from the malignant tumors in showing no symptoms of its primary origin, in manner of growth, its long duration and lack of cachexia; from gumma by lack of specific history, no response to luetic treatment, and the fact that it is rarely nodular; from abscess of the liver by no previous history of amebic dysentery, by being larger in size, and being usually noticed before onset of suppuration.

Numerous cases have had exploratory laporotomy performed without previous absolute diagnosis, and have resembled so closely sarcoma, cancer or gumma that its true nature has only been revealed by removal of a portion of the growth for microscopic diagnosis, and in so doing the cyst wall has been punctured, proving true condition.

If undiagnosed, hydatid cyst of the liver may directly cause death from suppuration of its contents with subsequent general sepsis, or from rupture into pleura or peritoneal cavities or some viscus. In rare cases, where it develops in the brain or spiral cord, it poduces symptoms common to a slow growing tumor in these areas and may thus prove fatal, or it may bring about death indirectly through continually increasing pressure on various important organs, as heart, liver, intestines, etc.

Treatment. There are three methods employed: (1) Injection, (2) Incision and drainage, or marsupialization, (3) Incision and enucleation of cyst wall.

(1) Injection. Formerly practised to quite an extent, especially after preliminary aspiration for diagnosis, by the use of a few cc. of 1 to 1,000 bichlorid, or 2 to 4 per cent. formalin, etc. This is not always effectual and may not kill the scolices, and the cyst may not shrink to any great extent, so that later symptoms of pressure will return. There is great danger of leakage with gardual generalized peritoneal involvement.

(2) Incision and drainage. Here an incision is made over the tumor, the abdominal cavity is carefully packed off with gauze before the tumor is opened, which allows escape of fluid and daughter cysts. The interior of the cyst should be explored with the finger, or lightly with a curette, to loosen any daughter cysts or scolices still adherent. Irrigation is then advisable to remove any daughter cysts as far as possible and the use of an antiseptic solution is of value to kill any remaining brood capsules. A drainage tube may then be inserted, so that there will be free drainage and also allow further antiseptic irrigation. Later gauze packing may be used, or it may be used at first in place of the drainage tube if the cyst be small. Following incision and removal of contents the cyst shrinks in size and gradually granulates. It is advisable to stitch cyst wall to peritoneum to protect abdominal cavity. Usually healing takes place with cessation of drainage in from two to four weeks, though occasionally, as in case reported, there may be a free flow of bile for an indefinite time, if the cyst wall be in close relation to or opens up the gallbladder or one of the larger bile ducts. If cyst present on diaphragmatic surface of liver under lower ribs, approach can only be gained by resection of one or more ribs, in order to get needed space. If it lie so high on upper surface of the liver that a transpleural incision is required, a two stage attack will be of advantage, at first only suturing diaphragm and pleura to develop adhesions and prevent leakage.

(3) Incision and enucleation. Here a larger incision through the abdominal wall is required, an incision made into the liver substance if necessary, and as much of the cyst wall as possible resected after drainage of contents. In rare cases the whole sac may be shelled out, wound in liver sutured, and incision closed without drainage, though there is danger of severe hemorrhage from raw surface of liver. Some authors claim cyst will can be dissected free from its connective tissue covering without rupturing the cyst, then according to location partial or complete resection of covering fibrous tissue coat may be carried out. As a rule, owing to location of cyst, incision and drainage is the operation most applicable, especially if the cyst be embedded in the liver substance, lie on diaphragmatic surface or, as in this case, be adherent over so large an area that resection is impossible, or where condition of patient requires speedy relief and prevention of hemorrhage.

Mortality following operation depends on method involved and presence or absence of suppuration. Statistics from some clinics give a mortality from incision and drainage in uncomplicated cases of from 2 to 5 per cent. Following enucleation in simple cases it is slightly higher, 5 to 10 per cent., and in suppurative cases the rate is from 20 to 35 per cent.

The Cause and Relief of Pain in Duodenal Ulcer. A. The cause of pain in duodenal ulcer is the hydrochloric acid contained in the gastric juice coming in contact with the ulcerated surface after it has passed into the duodenum. This conclusion is based on the following observations: (1) Ulcer of the duodenum reflexly excites a hyperacidity of the gastric juice; (2) the maximum amount of secretion of hydrochloric acid in the stomach is due to a direct chemical action (hormones) and is at its height from one to four hours after meals; (3) it passes into the duodenum as hydrochloric acid, there being no food for four hours after meals for it to work upon; and (4) it does not excite a flow of the duodenal juice directly, and is not neutralized by the small amount present.

B. The relief of pain in duodenal ulcer follows the ingestion of any substance into the stomach, and is due to a reflex stimulation of the duodenal secretion which neutralizes the acid gastric juice. This conclusion is based on the following facts already demonstrated in the above experiments: (1) Food taken into the stomach excites at once a reflex secretion in the duodenum; (2) the duodenal secretion is alkaline in approximately the same degree as the gastric juice is acid; and (3) this secretion is of sufficient quantity and concentration to neutralize the hydrochloric acid of the gastric juice.—(By James T. Pilcher, M. D., A. M. Journ. Med. Science, May 1, 1911.)

Acute Appendicitis. In conclusion I would say that if there is one fact in the field of medicine which has been demonstrated conclusively, it is that the rational treatment of acute appendicitis is in operation, early and immediate if possible; late, postponed, or absolutely contraindicated only by the presence of other conditions which may be complications of the disease itself or entirely independent of it, mere coincidences which render the performance of any operation too hazardous. Advice other than this no man has a right to give.—(By John B. Deaver, M. D., Annals of Surgery, June, 1911.)

NORTHWEST MEDICINE
The Journal of the State Medical Associations of Oregon, Washington, Idaho and Utah.
Devoted to the Interests of the Medical Profession of the Pacific Northwest.
Editorial Office, 719-22 Cobb Building, Seattle, Wash.
JULY, 1911.

EDITORIAL

ASSOCIATION MEETINGS.

Oregon State Medical Association, Portland, July 10-12.

British Columbia Medical Association, Vancouver, August 31-September 1.

Washington State Medical Association, Spokane, September 5-7.

Utah State Medical Association, Salt Lake City, October 4-5.

Idaho State Medical Association, Boise, October 11-13.

THE JULY MEETING AT PORTLAND.

The meeting of the Oregon State Association at Portland, the 10th and 12th of this month, will be a memorable one, according to present indications, and all physicians of the Northwest who can arrange to do so should aim to be present. Officials of the association established headquarters at Los Angeles, during the meeting of the American Medical Association, for the purpose of securing a number of distinguished eastern men to appear on their program, in addition to those already announced on the preliminary program. It is probable some of the latter will be unable to attend the meeting but their places will be satisfactorily filled. This will be an unusual opportunity for the profession of Oregon and adjacent states to hear papers and addresses on important topics by masters of the medical art. The Oregon Association will expect a full attendance of its own members and it extends a cordial invitation to the physicians of Washington and Idaho. The Portland City and County Medical Society has been to considerable expense and labor in preparation for the entertainment of visitors from the A. M. A. meeting who will pass through the city from Los Angeles, as well as for visitors to the state association meeting. It is intended to make this one of the most successful meetings in the history of the association both from the scientific and social standpoints.

The preliminary announcement for the meeting is as follows:

PRELIMINARY PROGRAM.

You are cordially invited to attend the annual meeting of the Oregon State Medical Society, to be held in the Auditorium of the Commercial Club, July 10, 11, 12.

We have departed from our usual custom, and are going to have a series of lectures and clinics by noted Eastern teachers. Amongst the rare opportunities in store for you are:

Dr. John B. Murphy, of Chicago, on the work at Mercy Hospital.

Dr. John B. Deaver, of Philadelphia, on some surgical topics.

Dr. Frank Billings, of Chicago, will give two clinics on medical cases.

Dr. Mazyck P. Ravenel will give us two papers on Research Work in Tuberculosis.

Dr. W. J. Butler, of Chicago, will deliver an address on Serum-Therapy.

Dr. M. H. Fussell, of the University of Pennsylvania, will give one or more papers in Internal Medicine.

This will perhaps be one of the greatest opportunities for post-graduate work that has ever been offered to the medical profession of the state.

The social and entertainment features will be unusually attractive.

The City and County Medical Society will be hosts at a banquet.

Automobiling, Baseball, Boating, Sightseeing.

Come! C. S. W.

REDUCED RATE TO PORTLAND.

It is desired that every one attending the meeting outside of Portland shall observe this notice concerning reduced railroad fares. The rate will be one fare and a third on all roads, providing fifty such tickets be purchased. It will be necessary to pay one full fare to Portland. Get a receipt from your ticket agent when you buy this ticket. On presentation of this receipt to the Secretary of the meeting at Portland for its validation, you will be entitled to a one-third fare home. Remember, however, this reduction will not be secured unless fifty such tickets are presented. This means that those traveling but a few miles must secure receipts for their tickets, in order that those from a greater distance may have the benefit of the reduction.

C. S. W.

PRESIDENT TAFT AND PURE DRUGS.

It is fortunate for the physical welfare of the people of our land that we have in the presidential chair a man who is alive to their interests and who appreciates the necessity of laws to regulate matters pertaining to their best health. This fact has already been shown in his interest in the establishment of the proposed public health bureau. It is again demonstrated in the alacrity with which he has responded to the recent decision of the Supreme Court which held that the law of 1906 does not apply to false labeling as to the curative effect or action of certain nostrums. If this decision were to be accepted unchallenged and uncorrected, it would open the door to the indiscriminate sale of noxious patent medicines and nostrums and would vitiate much of the good work recently accomplished in suppressing many of the poisonous concoctions so freely offered for public consumption. In his message to Congress President Taft urges immediate action to correct the defects in the law which the Supreme Court has shown to exist. He says that in his opinion the sale of dangerous adulterated drugs under knowingly false claims as to their effect in diseases constitutes an evil of sufficient magnitude to warrant his calling the matter to the attention of Congress. It would indeed be a calamity if the law were to remain unaltered and of such character as to give free reign to the cupidity of the patent medicine imposters who infest the land and fatten on the ignorance and delusions of their victims. It seems impossible that Congress should fail to respond at once to such an appeal from the President.

C. A. S.

SUMMARY OF IDAHO LAWS AFFECTING THE MEDICAL PROFESSION.

The following facts are presented which should interest every physician of Idaho. The Medical Practice act provides for the examination and licensing of physicians, which was passed in 1899 and amended in 1909, permitting the board of examiners to license without examination any having certain credentials, who have passed examination in some other state, whose requirements are equivalent to those in this state. The granting of such license is optional with the board of examiners.

The optometry law, passed in 1907, provides for the examination and licensing of opticians by an independent board of examiners. Licensed physicians are not required to appear before this board. Practice under this law is limited to fitting of glasses but, as every physician knows, disturbances of vision are so frequently associated with and partly dependent on disturbances of other organs that no one except the educated physician should be allowed to treat these patients.

The osteopathic law, passed in 1907, provides for examination and licensing of osteopaths by a board of osteopaths. This law speaks of osteopaths as "osteopathic physicians" and permits them to write death certificates and to report contagious diseases and other matters pertaining to public health to "health boards the same as other schools of medicine," thus recognizing that they do "practise medicine." The law does not prevent any one from practising osteopathy or any allied cult, providing he gives it a different name, as chiropractic, vitopath, etc., and does not prescribe drugs.

The law creating a State Board of Health was passed in 1907, providing for the appointment of such a board, the securing and recording of vital statistics, reporting and quarantining of contagious diseases and other matters affecting the health of the people. It was amended in 1909 and 1911, providing for securing more accurate vital statistics, for state bacteriologic laboratories, also putting inspection and regulation of dairies and slaughter houses under supervision of the Board of Health.

There is a law prohibiting the advertising of any medicine or means to prevent conception or to produce abortion, a law prohibiting the production of abortion, or securing or submitting to the production of the same. Under this law the testimony of the woman having an abortion performed is not sufficient alone to convict and, since the law incriminates the woman, it is practically impossible to secure evidence to convict.

The legislature of 1911 passed a law prohibiting the sale of adulterated or misbranded drugs; a law providing for a state sanitarium for epileptics and feeble-minded; a law providing for examination and registration of graduate nurses.

J. M. T.

THE LOS ANGELES MEETING.

We are unable to make any report at this time of the A. M. A. meeting at Los Angeles which is in session while we go to press, in consequence of this issue appearing earlier than usual, so as to reach our readers before the Portland meeting. It is a satisfaction to know that a reasonable number of delegates from the states of the Northwest are in attendance on the Los Angeles meeting.

MEDICAL NOTES

OREGON.

Meeting of Eastern Oregon District Medical Society. This society will hold a session at Pendleton on September 13 and the morning of the 15th, the latter being the first day of the "Round Up," which is the great annual celebration of that city. A large gathering of medical men is expected from all parts of the Northwest.

A Home for the Medical Society. A twelve or fifteen-story building, to be the home of the City and County Medical Society, is a project being agitated at present in Portland. Nearly $15,000 was subscribed at the annual meeting and banquet, held May 17, there being several subscriptions of $1,000 each. A committee consisting of A. K. Smith, George Parrish and William House was appointed to obtain subscriptions. The following officers of the society were elected for the ensuring year: President, William House; vice-president, N. W. Jones; secretary, G. S. Whiteside; treasurer, Katherine C. Manion.

Prosecution of Chinese Doctors. The decision of the Circuit Court, in the case of the Chinese "doctors" who were prosecuted by the State Board of Medical Examiners for practising without license, is praiseworthy and should check the tendency of illegal practitioners to appeal on mere technicalities. The court affirmed the decision of the lower court and nearly doubled the fine which had been imposed.

Dr. E. D. Plummer was married to Miss May Eaton at

Aberdeen, Wash., on May 28. Dr. and Mrs. Plummer will reside in Portland.

WASHINGTON.

Winner of the Walker Prize. Dr. J. P. Munson, of the Washington State Normal School, at Ellensburg, has been awarded the Walker prize, an honor which is sought by the most prominent biologists of the country. Dr. Munson's thesis deals with a new theory of the origin of life and gives the results of extensive original investigations.

The Toppenish Hospital. Mr. L. F. Bazner has recently purchased the Toppenish Hospital from Dr. H. M. Johnson, who will resume his private practice. Mr. Bazner will give his personal attention to the management of the hospital.

A Tuberculosis Prize for School Children. The state prize, offered to school children by the Washington Association for the Prevention and Relief of Tuberculosis for the best essay on the prevention and treatment of tuberculosis, was won by Olive Brown, of Tacoma. The state and city prizes of five dollars each were given to the association by the labor unions of the state.

A New Work on the Eyes. The Cleveland Press, of Chicago, has in press a book on "Injuries of the Eyes," by Dr. H. V. Wurdemann, of Seattle. This will be the only modern work in English on this subject. It will contain about 900 pages, profusely illustrated, mostly by the author, with new and original pictures. It will appear about September 1st.

A. M. A. Visitors in Seattle. In order to entertain delegates passing through Seattle from the A. M. A. meeting at Los Angeles, the King County Medical Society appointed the following committee to co-operate with the Commercial Club: R. J. O'Shea, G. H. Horton, P. W. Willis, G. S. Peterkin, E. M. Rininger, J. B. Eagleson, W. A. Shannon, H. M. Read, J. C. Moore and C. W. Sharples.

Dr. Herbert E. Wheeler, of Spokane, was married to Miss Beulah M. Smith, of that city, June 7.

Dr. F. C. Shute has been reappointed county physician of Whatcom County for a term of two years.

IDAHO.

Nampa Medical Society. A medical society was formed at Nampa on the evening of May 15, which includes all the physicians and surgeons of the town. The following officers were elected: President, Dr. Kellogg; vice- president, Dr. Murray; secretary-treasurer, Dr. Quick. Meetings will be held monthly.

Schools for the Treatment of Tuberculosis among Indian children will be established at Phoenix and Lapwai, $20,000 having been appropriated by the Indian Department for that purpose.

Dr. C. M. Cline, of Idaho Falls, has removed to Boise to practise and will have offices in the Overland building.

BRITISH COLUMBIA.

The Semi-Annual Provincial Medical Examination was held in Victoria during the first week in May. Of the forty-five applicants, thirty-one were granted permission to practise.

The St. John's Ambulance Society is to establish branches in Vancouver and Victoria. In speaking upon the subject, Mayor Morley, of Victoria, urged that ambulance work be incorporated in the school curriculum and that a course of special lectures, open to the public, be given upon such subjects as home nursing, first aid, and sanitation.

Hospital Saturday in Vancouver netted close to $6,000, nearly $1,000 more than last year.

REPORTS OF SOCIETY MEETINGS

KING COUNTY MEDICAL SOCIETY.

Prest., G. B. McCulloch, M. D.; Secty., H. E. Coe, M. D.

The regular semi-monthly meeting of King County Medical Society was held in the Assembly room of the Chamber of Commerce, Seattle, Wash., June 5, 1911, about 84 members being present. Meeting was called to order by President McCulloch at 8:03 P. M. In the absence of the secretary, John Hunt acted as secretary pro tem. The minutes of the preceding meeting were read and approved.

PATHOLOGIC SPECIMEN.

Carcinoma of the Uterus. P. W. Willis presented this specimen, showing extension to the bladder and both ureters. Death was caused by uremia. During the past two years patient had been under palliative treatment. During the past six months instillations of acetone, three times a week, were given. The latter treatment seemed to relieve the pain and lessen the discharge.

PAPERS.

Arteriosclerosis with Especial Reference to the Heart and Kidneys. Carl Neu read this paper. He began with examples of two types of arteriosclerotic patients and called attention to the influence of arteriosclerosis on other diseases. He divided the disease into two stages, atheromatosis of the small arteries and sclerosis of the large arteries. Then discussed the microscopic anatomy, relation of pathologic changes to the clinical picture with reference to both the heart and kidneys; differentiation from nephritis; causes of pathologic changes; treatment.

Eye Changes in Arteriosclerosis. G. W. Swift read a paper on this subject, speaking of the importance of the eye symptoms, peculiarities of the anatomy of the eye; pathogenesis, description of the eye grounds at various stages of the disease; relation of the eye changes to the general condition; value of the eye changes in early diagnosis.

Some Recent Forms of Treatment in Arteriosclerosis. W. C. Heussy read this paper under the following heads: Relation of blood pressure to arteriosclerosis; necessity of early recognition; etiology and its relation to treatment; drugs used in treatment and method of action; hygienic treatment.

In discussion, F. M. Carroll spoke of the frequency of the disease, the possibility of occurrence early in life, hypertrophy, endocarditis and myocarditis as heart sequelae and chronic interstitial nephritis usually following the heart involvement.

W. T. Woolley spoke of Thayer's finding arteriosclerosis twice as frequently following typhoid as following other diseases; difference of opinion as to place of origin of the sclerotic process; unsatisfactoriness of treatment.

D. DeBeck discussed the value of the eye findings in diagnosis; cerebral arterial changes; the use of bleeding by Fox when there was liability of blindness and lack of uniformity in post mortem findings in the eye.

P. von Phul spoke of the minor part played by drugs in treatment and emphasized the education and regularity in daily life only to be obtained at some watering place. Bleeding is recommended in acute arteriosclerosis.

H. Stillson spoke of the necessity of thorough dilatation of the pupil before examining with the ophthalmoscope; examination in both erect and recumbent positions; and the appearance of eye grounds.

W. F. Cunningham called attention to Metchnikoff's theory of autointoxication as a cause of the disease and his statement that the large bowel is unnecessary for digestion.

K. Winslow recalled Osler's statement that the causes of the disease are time, toxin and tension. He spoke of the relief given by ergot in dizziness, the action of iodide of potash in relieving pain, and the effect of climate.

F. S. Bourns stated that he had seen but one case in the colored race and called attention to the fact that this race uses tobacco and alcohol and has tuberculosis and syphilis, but is not bothered by care or worry.

In closing the discussion Dr. Neu stated he considered that the disease process begins in the intima.

Dr. Swift spoke of the methods of examination of the eye and stated that asthenopia is common in arteriosclerosis.

Dr. Heussy emphasized the fact that the most efficient treatment is in the presclerotic stage and that this stage must be recognized especially by the increased blood pressure.

The second regular semi-monthly meeting of the King County Medical Society was held in the Assembly room of the Chamber of Commerce, June 19, 1911. The meeting was called to order by the president, Dr. McCulloch, at 8:10 P. M., about 95 members being present. The minutes of the last meeting were read and approved.

Clinical Cases.

Fracture and Dislocation of a Vertebra. A. F. Edwards presented a case of this nature, giving the history of the case and showing the patient to the society.

Sarcoma of the Thyroid. W. C. Heussey presented this case in a man, age 27. The family and personal history were negative. The growth has been very rapid and has extended over a period of six months. The differential diagnosis was discussed and the patient presented to the society.

Sarcoma of the Face. I. V. Freedman presented this case in a man, age 52. The growth began six months ago; as a nodule the size of a bean at the bridge of the nose, extending over the whole left side of the face and neck, first as separate growth and later coalescing.

Fracture of Both Sides of the Lower Jaw. H. G. Lazelle presented case of this character for W. C. Woodward. A large sinus had formed and the case was presented to show the good results obtainable with bismuth paste, the sinus being completely healed.

Fibroma Moluscum. C. A. Warhanik presented this case of 15 years' duration. The tumors began with a small growth on the forehead, the extension being slow for the first five years. Within the last ten years very many more have appeared, especially over the chest and back. There is no pain and only mechanical discomfort. Microscopic sections from one of the growths show that it is really a fibroma although partaking of the nature of a neuro-fibroma and in places being so cellular as to appear almost like a carcinoma. Dr. Warhanik exhibited the patient to the society and discussed the various types of fibroma moluscum.

Absence of Posterior Quadrant of Cervix Uteri. P. V. von Phul presented this case of S. F. Wiltsie's. The symptoms were extreme pain on coitus and upon any palpation of the external genitals. There had been an abortion at the end of the second month of pregnancy. Examination under anesthesia showed the absence of the posterior quadrant of the cervix and the mucous membrane of the vagina was continued with that of the body of the uterus.

Hemiplegia in Children of Three Years. C. F. Davidson reported this case for D. A. Murray. Antitoxin had been given for diphtheria with good results. Three weeks later, after taking some ice cream, the child had a slight convulsion; the following day another convulsion followed the taking of more ice cream; following the second convulsion hemiplegia was first noticed. The question which arose was whether the hemiplegia was due to a delayed post-diphtheritic condition or to a cerebral lesion following the convulsion.

In discussing this case, F. J. Fassett cited several cases to show that cerebral lesion followed by paralysis was due to a convulsion. J. B. Manning corroborated this and cited a report of 35 cases somewhat resembling this. He stated that the usual location of the hemorrhage is the internal capsule.

Tumor of the Hypophysis. Maud Parker presented radiographs of this case, which she presented to the society at a previous meeting. The plates showed noticeable increase in the size of the sella turcica and illustrated the importance of the X-ray in such cases.

D. H. Palmer presented a new self-retaining vaginal speculum which he has contrived and explained it to the society. In describing his recent Eastern trip, he mentioned the work done by the Mayos, at Rochester, speaking in detail of some special operations. Of Philadelphia operators he described the work of Clark, Deaver, Beckman, Davis and Price.

Address.

A Few Practical Hints on Blood Examination. O. J. West gave this address, stating that a blood smear will give in a rough way the number of red cells, of white cells and also the reason for increase of the white cells should there be any. Leukocytosis of 15,000 to 20,000 may be physiologic, illustrating the uselessness of relying upon a leukocyte count alone in diagnosis. In discussing the examination of a blood smear he called attention to the fact that the leukocyte count increases in direct proportion to the rise in percentage of the polynuclears, the exceptions to this rule being leukemia and overwhelming sepsis. The grade of anemia can be estimated by the presence and numbers of antypical red cells.

The secretary read an invitation from the Seattle Surgical Club to attend an address to be given before the club by Dr. Charles H. Fraser, of Pennsylvania, on the evening of July 8, at the Chamber of Commerce.

H. E. Allen read a report of the Board of Trustees to date.

W. C. Heussy moved that the society give its endorsement to the work of the Anti-Tuberculosis League, of King County, which motion was seconded by H. D. Dudley.

B. S. Paschall objected to this motion on the ground that he did not think tho league would keep its promise of not referring pay cases. A standing vote was called for and the motion was carried by a vote of thirty-five to twenty-seven.

WHITMAN COUNTY MEDICAL SOCIETY.

Prest., W. C. Cardwell, M. D.; Secty., J. E. Else, M. D.

The first joint meeting of the Whitman County and the North Idaho District Medical Societies was held in the Odd Fellows Hall, Pullman, Wash., June 12, 1911.

Present were Drs. Alley, Ft. Lapwai; Aspray, Moscow; Benton, Pullman; Boyd, Palouse; Brandon, Albion; Bumgarner, Thornton; Campbell, Pullman; Cardwell, Colfax; Carithers, Moscow; Eikenbary, Spokane; Else, Pullman;

Heldring, Pullman; Hinman, Spokane; Hoyt, Kendrick; Harvison, Palouse; Jamison, Moscow; Johnson, Spokane; Kalkus, Pullman; Maguire, Pullman; MacGregor, Garfield; McIntyre, St. John; Marshall, Spokane; Palamountain, Colfax; Ralston, Pullman; Rockey, Portland; Roe, Julaetta; Skaife, Colfax; Stevenson, Palouse; Toumy, Genesee; Wegner, Pullman; Williamson, Portland; and Mesdames Bumgarner, Cardwell, Else, Maguire and Palamountain.

AFTERNOON SESSION.

The meeting was called at 4 P. M., with Dr. Cardwell, president of the Whitman County Medical Society, in the chair, and Dr. Carithers, secretary of the North Idaho District Association, as secretary. Dr. Cardwell, in a few well chosen remarks, welcomed the visitors and members.

PAPERS.

Gallstone Troubles. Dr. MacGregor, of Garfield, presented this paper, which dwelt chiefly with the diagnosis of gallstone troubles. He believes that gallstones are the result of gallbladder infection and hence are of secondary interest. The paper was very freely discussed.

The Treatment of Tuberculosis. Dr. Marshall, of Spokane, in this paper, went into the treatment quite extensively, taking up under separate heads diet, rest, fresh air, drugs and tuberculin.

It was very ably discussed by Dr. Alley and others.

Dr. Aspray reported a case of pancreatitis.

An excellent banquet was served at the Palace Hotel, where good fellowship prevailed. Toasts were responded to by Drs. Williamson, Aspray, Johnston, Rockey and Cardwell.

EVENING SESSION.

The meeting was presided over by Dr. Aspray, president of the North Idaho District Medical Association, with Dr. Else, secretary of the Whitman County Medical Society, as secretary.

PAPERS.

Ophthalmoplegia. By Dr. Williamson. He stated that this was a condition about which the specialist as well as the men in general practice knew but little. It occurs more frequently than is generally supposed. He reported four cases. Dr. Johnston opened the discussion. He reported cases that had come under his observation.

The Effect Upon the Liver of Removal of the Gallbladder. In this paper Dr. Else reported some experimental work he was doing.

Surgical Operations on the Obese and the Advantages of Preparatory Fasting. Dr. Rockey, of Portland, in this paper spoke of operations he had devised for the removal of superfluous fat and incisions for abdominal operations in fat people. He dwelt mainly upon the methods and benefit of preparing the patients by fasting. Twenty-one days is the usual time required. The paper was discussed by several. Dr. Rockey, in closing, related one case in which a woman was able to walk forty blocks and climb five flights of stairs at the end of three weeks' fast. At the outset she could walk only a block or two and could not have climbed the steps at all.

Principles of Specific Therapy. Dr. Hinman read this very excellent paper, which was discussed by several.

Dr. Eikenbary presented a very ingenious apparatus for the reduction of fractures of the femur.

A vote of thanks was given Drs. Williamson, Rockey, Hinman, Marshall, Johnson and Eikenbary. Dr. Aspray, on behalf of the North Idaho Society, thanked the Whitman Society for originating the idea of the joint meeting. All were of the opinion that, as the meeting was so successful, it should be made an annual affair.

BOOK REVIEWS

Edited by Kenelm Winslow, M. D.

American Practice of Surgery. A Complete System of the Science and Art of Surgery, by Representative Surgeons of the United States and Canada. Editors, Joseph D. Bryant, M. D., LL. D.; Albert Buck, M. D., of New York City. Complete in Eight Volumes, Profusely Illustrated. Vol. VII. William Wood & Co., New York, 1911.

This volume is the concluding one of this monumental work. The production will stand for all time as a milestone in the progress of American surgery. The volume opens with a chapter on intrathoracic surgery, after which are considered in turn the surgery of the liver and bileducts, the pancreas, the spleen, the kidneys, bladder and prastate, and the surgery of the female pelvic organs. A chapter is devoted to the legal aspects of the practice of surgery, and the volume closes with a chapter entitled "Administrative Surgical Work," in which are discussed hospitals and hospital management, military, naval and railroad surgery. The chapters on the surgery of the pancreas, the liver, gallbladder and bileducts are to be particularly commended. It is rather unique for a work on general surgery to devote so much space of gynecologic operations. The single chapter on the surgery of the uterus and its ligaments, by Murphy and Lynch, is ample justification for this departure. The subject is presented from the standpoint of the general surgeon and with a clearness and simplicity that is not often met with in the writings of gynecologic specialists. The editors and publishers are to be congratulated on the successful completion of their stupendous task. The work as a whole will stand as an authoritative reference with America surgeons for many years to come. JONES.

Joint Tuberculosis. By Leonard W. Ely, M. D., Attendin Orthopedist to the Children's Hospital, Denver, Col. Consulting Orthopedist to Roosevelt Hospital, New York etc. Illustrated. Price $2.50, net. William Wood & Co. New York City, 1911.

In this book the author gives an original and plausibl interpretation of his study of a wealth of pathologic material and a theory of treatment based on the pathology His thesis runs somewhat as follows: In and about joint are these structures, bone, red marrow, cartilage an synovial membrane. Of these structures only two—th synovial membrane and the red marrow—are fitted b their structure to harbor tuberculosis. These same tw structures are the ones that are found in joints an nowhere else. Therefore, when a joint ceases to be joint, that is, is permanently deprived of function, thes two essential structures disappear and with them th tuberculosis. The application of this in treatment is a follows: In adults, where possible, just enough bone i removed by operation to insure firm union without r gard to whether all the diseased bone is removed or no In children, the natural resistance is so great that temporary deprivation of function usually accomplishe the same purpose. The book is an excellent statemen of the usual treatment, plus a reason for it. FASSETT.

A Practical Medical Dictionary. By Thomas Lathro Stedman, A. M., M. D. Editor of the Medical Recor Editor of Twentieth Century Practice of Medicine. I lustrated. 1,000 Pp. Flexible leather binding wit thumb index. William Wood & Co., New York Cit 1911.

This is an admirable, new medical dictionary whic has involved immense labor. It is not bulky or hea because it is printed on thin, unglazed paper in two co umns to the page. Its excellence depends on many fa tors. In the first place, it appears to be very complete, although it may not contain the latest word coined. It does include dental, veterinary, chemical, botanical, electrical, life insurance and other special terms; also the BNA nomenclature and drugs official in the U. S. P. and B. P., and those found in the national formulary. It combines in one volume the special advantages of several of the leading medical dictionaries by being strong in both derivation and pronunciation. In case of any doubt as to the pronunciation the word is spelled phonetically. The book is wonderfully replete with eponymic references and under the author's name will be found the date of his birth, place of residence and title to medical reputation. It is pleasing to note that the diphthongs are eliminated in simplifying the spelling which, as Stedman points out, was begun by the direct descendants of the Latin race, the Italians and Spanish, who have dropped a and the o from the ae and oe. The illustrations are used to explain instruments, sutures, crystals, bacteria, etc., which cannot be easily described by words. The only error noted was that Harrington's solution was ascribed to F. B. Harrington, instead of to the late Charles Harrington, who discovered this most valuable antiseptic as the result of many experiments with alcohol and corrosive sublimate. This work is excelled by none. WINSLOW.

A Treatise on Diseases of the Nose, Throat and Ear. By William Lincoln Ballenger, M. D., Professor of Laryngology, Rhinology and Otology in the College of Physicians and Surgeons, Chicago. New (3rd) edition, thoroughly revised. Octavo, 983 Pp., with 506 engravings, mostly original, and 22 plates. Cloth, $5.50, net. Lea & Febiger, Philadelphia and New York, 1911.

It would be hard to imagine, in the light of our present knowledge, a single volume on these subjects more comprehensive or more clearly written. The author's ability as a teacher, combined with his knowledge and his skill as an operator, fit him especially well for the task he undertakes in presenting a complete text-book on the nose, throat and ear. The standard attained in the first two editions accounts for the demand in less than three years for a third, and in this last it would seem that no opportunity for improvement has been overlooked. Sixty new drawings and five new plates have been added. Goldsmith's plastic operation for closure of recent perforations of the septum is described, vaccine therapy is given prominence, the sinus operations are discussed more fully, including the Canfield-Ballenger operation on the antrum of Highmore and Fletcher's sphenoidal operation. Vincent's angina is not overlooked, and some new matter appears on labarynthine disease. Functional tests of the vestibular apparatus and the subject of blood cultures in the early diagnosis of thrombosis of the lateral sinus are among the new things. The book is designed as a text-book for students, as a guide for practitioners and as a reference for specialists. It fulfills each purpose most excellently. SEELYE.

Food and the Principles of Dietetics. By Robert Hutchison, M. D., Edin., F. R. C. P. Physician to the London Hospital; Author of Lectures on Diseases of Children, etc.; with Plates and Diagrams. Third Edition. Cloth, Price $3 net. William Wood & Co., New York, 1911.

This is one of the standard works on dietetics. In the present third edition the volume has been thoroughly revised and considerably added to. The main additions are the incorporation of the work of Atwood, Bull and others of the U. S. Department of Agriculture, enlargement of the chapter on Diet in Disease, and a new chapter on Certain Dietetic Cures and Systems. The book is the outcome of Dr. Hutchison's lectures to the students at the London Hospital and has been especially designed to meet the requirements of students and practitioners, and is also intended to interest anyone desiring some knowledge of foods, and the difficult problems of nutrition. In manner of treatment it differs radically from other books on the subject. After a preliminary survey of the field, the classes of food and under them their constituent members are considered in full. It is a most valuable work on foods, and probably the most complete of the medium-sized books on the subject. A most commendable feature is the large number of food analyses and tables collected from the most diverse sources. The cuts are unique. To be presented with the picture of a carrot or beet divided to show its various chemical constituents and food value was frequent enough in college, but is rare in text-books. Dr. Hutchison's book is full of such illustrations. The author's attitude on some of the discussed questions of dietetics today may be of interest. He is a believer in a high proteid diet as against Chittenden, von Noorden, Coryani and Richter, but agrees with them that alcohol has no important power in diminishing nitrogenous waste. He deprecates the use of large amounts of proteid in fever on the ground that it tends to flood the circulation with the products of nitrogenous waste already too abundantly present. His statement that "There is no such thing as a 'diabetic diet'" will appeal to everyone aud his remarks on subcutaueous feeding are extremely interesting. In short, here is a book deserving of place in a physician's library, and one which any may read with pleasure and profit. HEAVENRICH.

Public Hygiene. By Thos. S. Blair, M. D., Neurologist Harrisburg, Pa., Hospital; Author "A Practitioner's Handbook of Materia Medica," etc. Assisted by numerous contributors. In two volumes, with 158 Illustrations. Cloth; price $10. The Gorham Press, Boston, 1911.

It is exceedingly difficult to write a comprehensive review of a work of such magnitude in the space alloted. It is difficult to point out the more excellent features of this great work since each volume contains, although concisely written, matters of vast importance and of great significance to sanitarians, medical men and to the people as a whole. The whole medical fraternity must, from this time on, become sanitarians, if they desire to keep in the forefront in their profession. In selecting a work on hygiene, it is wise to select that which is condensed, but not unreasonably so, and in which the different subjects have been handled in the peculiar way that they have been in Blair's work, so that we may have before us a strong, accurate and comprehensive treatment, embracing substantially every phase of work of which sanitarians and medical men should know. Books, loosely and unintelligently written, are so much waste upon our book shelves. Practically every subject has been so treated here that the mind is enabled at once to grasp the situation and one knows and realizes just what the author has intended to convey. The different special lines are well thought out and the facts scientifically stated. Among those who have contributed to this work we find the names of many men most eminent in the practice of medicine; of those foremost in the study of sanitation and those eminent in the sciences which make it possible to prevent disease and to bring about proper sanitary environments. If space allowed we could offer some slight criticism, but, taking the volumes as a whole,, it is by all means the best work which we have ever seen. CRICHTON.

The Principles and Practice of Modern Otology. By John F. Barnhill, M. D., Professor of Otology, Laryngology, and Rhinology, Indiana University School of Medicine; and Ernest de W. Wales, B. S., M. D., Clinical Professor of Otology, Laryngology and Rhinology, Indiana University School of Medicine. Second Edition; revised. Octavo of 598 pages, with 305 original illustrations, many in colors. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, $5.50; Half Morocco, $7.00 net.

The authors state that their aim has been: (1) To modernize the subject, referring particularly to the recent advances in the treatment of suppurative affections of the temporal bone. (2) To correct certain traditional beliefs, such as the notion that children will outgrow aural ailments and that a discharging ear is only a harmless annoyance. (3) To advocate the earliest possible prophylaxis or treatment, the possibilities of which, especially in children, are so brilliant. (4) To emphasize the importance of a thorough examination and a definite diagnosis as a basis for rational treatment, empiricism having played such a large part in the practice of otology. (5) To thoroughly illustrate the text, using few schematic drawings and many from the anatomical specimen or the clinical case. These objects are worthy ones, especially as the book is intended for the student and the general practitioner, and we believe the authors have succeeded admirably in each one.

The subject of mastoiditis in acute and chronic forms, with its treatment both medical and surgical including cranial complications is covered very thoroughly, over two hundred pages being devoted to this subject. Many new illustrations are introduced and the technic of the operative work is given in detail. A chapter which is specially good reading is the one on suppuration and necrosis of the temporal bone and its practical relation to life insurance. Discussing the surgery of the facial nerve, the authors suggest for restoring lost function the scheme of grafting the peripheral portion of the nerve on to another motor nerve, as the spinal accessory or the hypoglossal. The objection to bringing the spinal accessory in, they say, is that the result is a corresponding movement of the shoulder for every voluntary or involuntary movement of the face and vice versa. There would seem to be some ludicrous possibiyities to this operation.

The style throughout is clear and concise. It is to be regretted that the standard applied by the authors to their English should not have been maintained in their Latin in the numerous prescriptions which are offered. They are written in a conglomerate style, some all English, some all Latin and some English and Latin mixed, with no regard to case endings and with even a doubt left as t othe ingredients of the prescription in some cases. The opportunity to improve over the first edition in this respect was evidently overlooked and we wonder that the house of Saunders should pass such crude errors. Such valuable subject matter deserves a better finish.

Seelye.

Gonorrhea in the Male. A Practical Guide to Treatment By Abr. L. Wolbarst, M. D., Consulting Genitourinary Surgeon Central Islip State Hospital, Prof. of Genitourinary Diseases, N. Y. School of Clinical Medicine, etc., etc. 18 Pp. cloth. Published by International Journal of Surgery Co., New York, 1911.

To use the author's words, "this little volume (175 Pp.) is made up of a series of articles on gonorrhea in the male—to offer the general practitioner a working knowledge of the disease and a practical method of treating it successfully." It is a concise, accurate monograph on the subject, taking in turn the anatomy of the male genital tract, etiology, identification of the gonococcus, pathology, symptomatology and differential diagnosis. A chapter is devoted to treatment of acute posterior urethritis, of acute anterior urethritis, prostatitis, cellulitis, vesiculitis and other complications. The diagnosis and treatment of chronic infections is taken up; the text on treatment for all these lesions, is very complete, all the newer preparations being mentioned. While there is nothing radically new in this monograph, it is put into such clear, concise and readable form, and the pages on treatment so good, that it will be a very substantial aid to any general practitioner.

Peacock.

Golden Rules of Pediatrics. Aphorisms, Observations and Precepts in the Science and Art of Pediatrics. By John Zahorsky, A. B., M. D., Clinical Professor of Pediatrics, Medical Department, Washington University, St. Louis, etc. With an Introduction by E. W. Saunders, M. D., Emeritus Professor, Department of Children and Clinical Midwifery, Medical Department, Washington University, St. Louis, etc. Price $2.50. C. V. Mosby Co., St. Louis, 1911.

The whole field of pediatrics is here boiled down and appears in its most concise form. This sort of book may prove a dangerous instrument in the hands of a man who does no reading at all, but when it is used in conjunction with a good latent fund of information, or with a moderate amount of reading so that its suggestive power is appreciated and its limitations are understood, it should prove an extremely valuable little book. In the introduction E. M. Saunders briefly defines this branch of medicine, requiring, as it does, detailed care, patience and a natural fondness for children and presenting special problems. The contents are arranged under the following headings: Part I, Golden Rules of Diagnosis; Part II, Golden Rules of Prognosis; Part III, Golden Rules of Hygiene and Infant Feeding; Part IV, Golden Rules of Treatment; Part V, Formulary. This last chapter includes numerous prescriptions. For the purpose the author intended, to suggest to the busy practitioner practical points in diagnosis and treatment, this book should prove of distinct value.

Manning.

A Text-Book of Surgical Anatomy. By William Francis Campbell, M. D., Professor of Anatomy at the Long Island College Hospital. Second Edition Revised. Octavo of 675 Pp., with 319 Original Illustrations. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, $5.00 net; Half Morocco, $6.50 net.

The first edition of this work was reviewed in these pages a couple of years ago. That a second edition has been necessary in so short a time indicates the reception which the book has met. But little change in the text is to be noted but a number of new illustrations have been added which materially improve the value of the book. The work brings out clearly the clinical value of anatomic facts. Nothing but good can be said of it.

Jones.

Plaster of Paris and How to Use It. By Martin W. Ware, M. D., N. Y., Adjunct Attending Surgeon, Mount Sinai Hospital; Surgeon to the Good Samaritan Dispensary; Instructor of Surgery in the New York Post Graduate School. Second Edition, Revised and Enlarged. Price, Cloth, Square Form, $1.25; De Luxe Leather, $2.50. Surgery Publishing Co., New York.

We commented favorably upon the first edition of this book and find the second edition improved in many ways. New and useful pictures have been added. New procedures which have been introduced in the past four years have been incorporated in this edition. Some matters which seemed to us less well treated in the first edition have been rewritten or omitted as not properly included in the scope of the work.

Fassett.

NORTHWEST MEDICINE

The Journal of the State Medical Associations of Oregon, Washington, Idaho and Utah
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DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF THE PACIFIC NORTHWEST
Subscription Price $2.00. In clubs of twenty or more $1.00.

Entered March 14, 1903, at Post Office, Seattle, Wash., as Second Class Matter, under Act of Congress of March 3, 1879.

VOL. III. New Series. AUGUST, 1911 No. 8

ORIGINAL CONTRIBUTIONS

CHILD SURGERY WITH SPECIAL REFERENCE TO SOME OF ITS DIFFICULT PROBLEMS.*

By Edward A. Rich, A. M., M. D.
PORTLAND, ORE. AND TACOMA, WASH.

There are today some perplexing, unsolved problems confronting every surgeon doing operative work on children. It has been often proven in the past that a branch of surgery which is not definitely segregated from the great general field will not take on uniformity, nor solve its difficulties until the special worker, the specialist in that branch, arrives and gives it scrutiny. The child surgeon did not materialize until the most recent years, while the general surgeon covered the field, logically enough, as part of his mission.

As a result of this delay in the appearance of the orthopedist, who in the West has had to widen out into the surgical pediatrist, one cannot help but still notice the widest diversity of opinion upon several subjects pertaining to childhood. For instance, all surgeons now agree that a congenital club-foot requires attention—and there the uniformity of opinion ends. One man stretches gradually, another rapidly; one uses massage, while another cuts the contracted tissues; one of the latter operates early, another delays until the child creeps or crawls. And so it may be interesting before I enter the subject proper of the evening, that of the newer treatment of paralytic deformities, to preface this paper with a very brief resume of some of the major points in child surgery which have of late been passing through rapid stages of evolution.

Child Surgery vs. Adult Surgery.

I believe that the surgery of children is governed by rules and laws quite different from the surgery of the adult. An anesthetic is quite another process in the child, as those who have observed the findings of the Danish commission will attest, chloroform producing greater hematologic changes. He who enters the realm of child surgery should, I presume, be endowed with acumen and special training in objective diagnosis; and be familiar with idiosyncracies of repair, growth and rehabilitation of infantile tissues. How absolutely dissimilar one finds the radical repair of a hernia or an epispadias in a child to the same procedures in the adult.

Time of Operation.

Let us first consider the all important matter which constantly arises before one who operates on children, that of the proper time for operation. There is no question asked me so often as this one. The query comes by letter, over the phone and directly from confreres. "When would be the best time to operate on a harelip, a cleft palate, or a birth paralysis?" "How early would you operate on a congenital deformity of the limb?" "How long would you wait for restoration after the acute attack of infantile paralysis, before instituting radical measures?"

Perhaps it is little understood in America that there are deadly zones during a child's first year and that during these periods surgery is most positively contraindicated. Some of our surgeons have discovered that operative procedures in the last two weeks of the first month of a child's life are specially prone to disaster, but none have gone as far as Hübner, of Berlin, in working out these danger zones. Let me take at random a list of 1000 cases under one year, operated upon in the children's department of the Berlin Charite by the staff and the chief, and including, of course, all kinds of infants, breast-fed and bottle-fed, and usually from the poorer classes. The list includes emergencies as well as chosen work. First we arrange the 1000 cases diagramatically to show the age at the time of operation (Fig 1).

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*Read before King County Medical Society, Seattle, Wash., Dec. 5, 1910.

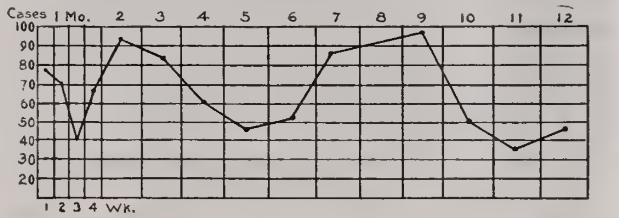

Fig. 1.
(255 1st month, 92 2nd month, 85 3rd month, 60 4th month, 48 5th month, 54 6th month, 86 7th month, 91 8th month, 95 9th month, 50 10th month, 36 11th month, 47 12th month.)

We next note the mortality during the various weeks and months of this first year, the total number of deaths from all causes being 39 (Fig. 2).

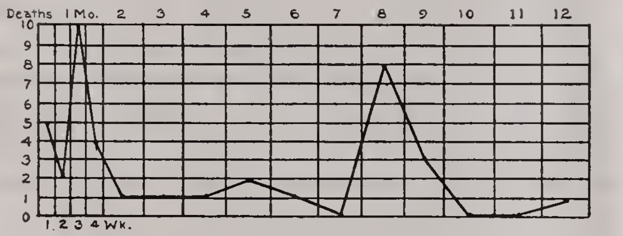

Fig. 2.

A glance at the lists, of which the above is only one, reveals the fact that there are periods during the first year, when postoperative mortality is high. The first period is during the latter part of the first month; the second period is during the eighth or ninth month. It is believed that there are good reasons for lessened resistance at these times. You will agree that at the time of birth the child is wonderfully endowed with resisting ability to withstand the trauma of delivery. Knowing this ability of the new-born to suffer severe trials without any marked signs of shock we believe that this inherent, congenital preparation is not dissipated until several days have elapsed. Then, as an equilibrium is being established after the beginning of mouth feeding and while the organs of digestion and assimilation are assuming their duties, there is a period of impaired vitality during which child life wavers and is easily put out of balance. This gives us the first danger zone in the third or fourth week, while the child is instituting a so-called independent existence.

In considering the second danger zone it must be understood that the eighth month is the usual time of weaning the Berlin saugling. There is some disturbance when the milk of the mother is replaced by other foods which results in a lowered resistance. Hence the mortuary peak of the eighth or ninth month is attributed to the changes of weaning.

Speaking broadly we might say that very urgent congenital deformities had best be operated upon during the second week; those not so urgent should be reserved for the third or fourth month. All surgery is contraindicated during periods of weaning and nutritional disorders.

Harelip and Cleft Palate Work.

Inasmuch as a question here arises along this line relative to the priority of operating on the various defects of the mouth and nose, I am going to deal for a moment more specifically with cleft and lip work. What has preceded certainly applies here. The earlier a harelip is approximated the better should be the result. Regardless of the operator it can easily be told by the resulting scar and the contour of the nostril whether a harelip was repaired in early infancy or later in childhood. We find it unnecessary in most cases that are uncomplicated to operate before the third month. However, if a cleft exist in the palate of a harelipped child, I believe it is important to operate earlier, say early in the second month. Please make note that the first step in closing the cleft is the closure of the harelip, not in the usual way where we aim to leave

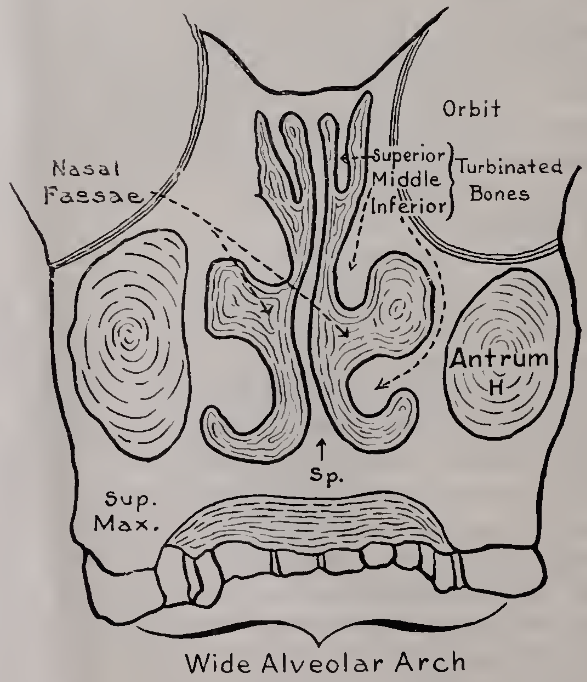

Fig. 3.
Diagram illustrating normal position of nasal structures and relative areas of the nasal passages.

no tension on the lip flaps, but by liberal paring and bringing them together with some tension. If, when a lip is so repaired, there be constant, splint-like pressure on the superior maxilla, and if, in conjunction with this pressure, the mother can be taught to press the two halves of the upper jaw together with her fingers many times every day, there will result a very beautiful, spontaneous narrowing of the cleft which will admit of the proper flap operation later. I have repaired lips in the manner mentioned on children with quite extensive clefts, have had them pass from view to return a year later with the cleft nearly closed and the alveolar process in nearly normal alignment (Fig. 3).

Opinion has been turning in regard to some of those operations which forcibly correct a cleft palate. For one, the typical operation of Brophy is not longer in favor among child surgeons, because of its bad results and because it is based upon bad embryologic pathology. Clinically, every child that undergoes a Brophy operation has his nasal passages nearly obliterated and will always talk without nasal intonations, or, as they say, "through his nose." (Fig. 4.) The Brophy method reckons that there is only a failure of the right maxilla to unite with the left when, as a matter of fact, Makuen has hit the nail on the head by declaring that the term "cleft palate" is a misnomer and that the condition should be termed "congenital insufficiency of the palate." It has been held that in the development of the embryo the palate process of the superior maxilla advances toward the median line to meet its fellow on the opposite side and, if there be a failure to so meet, a cleft of the palate results. But the idea which now prevails insists that there is an actual insufficiency of this palate process and a consequent gap from want of tissue. Forcing together of these incomplete parts surely causes occlusion of the nares. *If the forcible closure of the gap in the palate were as free from disaster, shock and meningitis as are some of the flap operations, it would not then be as praiseworthy.*

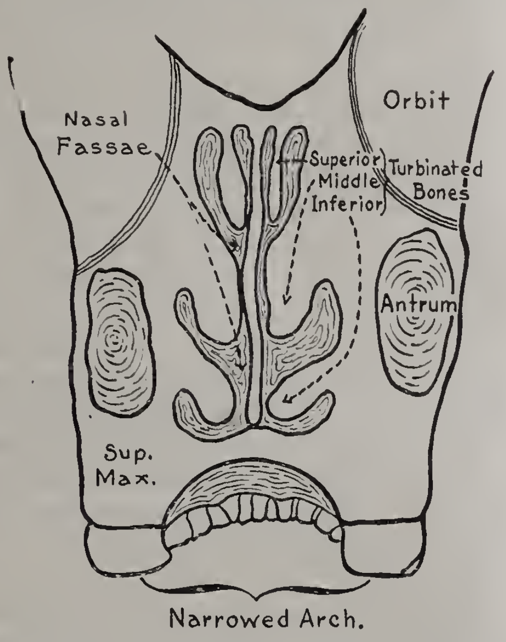

Fig. 4.

Diagram showing the late results of the obliteration of nasal fossae or passages by Brophy's procedure in ordinary cases of palatine insufficiency.

Work on Paralytic Deficiencies.

The subject of the treatment of deformities and deficiencies resulting from infantile paralysis is perhaps an absorbing one at this time due to the prevalence of recent epidemics. Fortunately the disease does not usually affect the nursing infant and we can then consider its effects in every age of childhood as being identical. The question arising is that of the length of time required for full spontaneous recovery and the period after the acute attack before operative interference is indicated.

While the fact is established that Nature often restores functions which have been nearly absent for as much as 18 to 24 months, it is nevertheless a fact that restorations only take place in muscles which have during that time maintained some degree of life. A muscle deprived of *all* enervation for as much as four months time will never regain activity. So we cannot longer say that all surgery is to be held back for two years in the hope of spontaneous cures. Rather we should make the galvanic current the basis of our surgical opinions. If after four months there be nervous irritability in a muscle, there is chance of greater recovery and no surgical measures are indicated. While, on the other hand, should we discover after such a period that the muscle absolutely refused to respond to electric stimulation, we know the muscle is dead and early orthopedic measures had better be taken to compensate for the permanent loss of function. We have, perhaps, since recognizing this truth saved much needless deformity.

We will pass on to the paralytic operations *per se.* One cannot wonder that members of the profession are more or less hazy upon the orthopedic measures now in vogue, for the simple reason that such tremendous strides have recently been made that the orthopedist can scarcely keep pace. The following statement is true: There is not one paralytic defection, except the absolute dangle leg, which does not yield to some recent surgical measure. The paralyzed limb cannot yet be made as beautiful as its fellow and often cannot yet be made to operate normally in minor ways; still, by judicious handling, the limb can be so altered that its main functions will be restored and the child removed from the crippled class.

The average physician when writing regarding a paralytic child writes in the atmosphere of ten years past, for he usually inquires whether there is not some nerve that can be transplanted. There is not a prominent orthopedic surgeon in America or Europe who is today attaining any marked success in nerve transplantation. As long as the orthopedist struggled with nerves, splitting them and implanting them in dead trunks, paralysis surgery remained at a standstill. When he declared himself beaten and looked for other means of compensating deficiency, his achievements became really marvelous.

Next to nerve grafting, the transference of tendons, that is, grafting tendon to tendon, has given us great disappointment. A transferred tendon will hold for a while, but sooner or later it stretches and the work is a failure, this, of course, being emphatically true when the tendon leads to a paralyzed muscle. We are still doing some tendon transference in the shoulder and arm but have largely given it up in the leg and foot where heavier work is demanded.

In taking up the popular methods I cannot burden you with any degree of detail, but shall attempt to present them in a general way that you may have before you an up-to-date resume. In other words, what would be done with a paralytic case presenting today with or without deformity.

As a matter of fact, most cases present deformity which must be corrected. This deformity is the direct result usually of carelessness on the part of the family physician. Three years ago I made a plea before the Washington Medical Association for the prevention of these deformities. I stated that every paralysis of every muscle spelt out some impending deformity of ankle, knee or spine when left alone to the mercy of the pull of the strong unopposed muscles. When the muscles of the front of the leg are dead and those behind are unaffected, the tendency always is for the live muscles, acting through the tendo Achilles, to pull the toes down, giving toe-drop. Any man with an ounce of ingenuity could hook an elastic strap to the toe of the shoe and hitch the other end to the leg above the calf and hold the toe up, but how many do you suppose do it? Prevention is the first requisite and essential of modern treatment. Every case should be looked upon as suspicious, and as soon as a joint begins to deviate from the normal, some contrivance must be worked out to keep it straight.

It is useless in most deformities to attempt correction by manipulation or half-hearted measures. The failures of the osteopaths prove that. When a bone or several bones are misshapen they must be cut down upon and their shape altered. Often we can remove entire bones advantageously to this deformity correction. I have a little mound of astraguli that have had to come out. Our favorite resort, however, is the cuneiform or wedge-shaped osteotomy. Usually the deformity correction is all that is attempted in the first operative step, and this part is the easiest of our work. I do not think that the bugaboo of fat embolism need deter us from making any needed entrance into any part of a bone. Muscle, tendon, fascia, ligaments or bone must give way until the normal position is regained.

The character of the case determines the measure to be used for that specific deficiency. I have stated above that we no longer expect results when we insert a tendon from a live muscle into the stump of a dead tendon; the dead tendon has no vitality, will never have; it will stretch and continue to stretch and thus dissipate muscle power. While all this is true, we have in the transplanted tendon from live muscles our first great aid in our work as an adjuvant to other work. But we do not longer insert the tendon into tendon *but directly into the periosteum of bones.* In some cases we attempt to fasten the tendon into the bone itself. By doing this we are enabled to place the muscle pull exactly where we want it and can be assured that the tendon, by taking advantage of the wonderful vascularity of the periosteum, will certainly unite at the point attached.

If a limb present with three or even two live muscles, these can be so disposed of by separating the muscles and advantageously implanting the tendons therefrom that the important functions of flexion and extension can at least be performed. A very common procedure at the ankle is to transpose an extensor tendon from the outer to the inner side of the foot, or vice versa, to correct a valgus or a varus. The points to need emphasis in this procedure are the following: the periosteum at the insertion must be of sufficient extent to surround the transplanted tendon for the distance of half an inch; the tendon must be sewed to the periosteum securely with fairly strong silk; and finally the joint must be immobilized for a long period of time.

One operation of great value in the reduction of common paralytic equinovalgus takes advantage of this measure and is known as the tendon-tunneling. In order to get more leverage farther forward in the foot, the joint between the scaphoid and the astragalus is removed and the bones sewed together, ankylosing the joint. Through a tunnel in the forward part of the scaphoid is passed the tendon of the tibialis anticus or the extensor hallucis or both. These tendons unite readily and firmly with the bone and by their reinsertion are made to correct the eversion of the foot and the toe drop, and also are made to supply motion again to the ankle.

Muscles proper can be transplanted in toto. At the knee when the quadriceps is paralyzed I have successfully transferred the sartorius on the one side and one hamstring on the other into the tendon of the quadriceps immediately above the patella. Children who have been unable to walk without some support to their knees have re-educated the muscles in their new locations so that they would perform extension, while in reality they were flexors. Again, muscles are transferred at the shoulder. In the most common paralysis there, that of the deltoid, a part of the trapezius is transplanted into the tendon of the pectoralis major, near its insertion into the humerus, and is successful in restoring some of the lost function in raising the arm.

To Hoffa, of Berlin, and to Lange, of Munich, we must give the credit for our most brilliant successes in paralytic surgery. Hoffa brought the value of arthrodesis to our attention. When it is remembered that the reason we have so many deformities of the foot is because the foot has so many joints, one can appreciate the fact that to rob a lax, paralytic foot of one-half its joints will still permit it to retain about as much motion as is present in the normal foot. There is no end of talk in this country against arthrodesis. They say it is a fine thing for the poor. This censure must come from untried sources. Personally I am out and out for the procedure, and I cannot see why my millionaire children should not be as favored as the children of charity. In older children the ankylosing of several joints of the foot gives a permanent, solid foundation for weight-bearing, and I understand that is what the foot is for—and, when properly used, leaves enough unimpaired joints to supply necessary motion.

In the flail hip, the joint can be ankylosed; in the wrist all the carpals may be amalgamated; often the elbow must be fixed in a useful position. But I think the term *ankylosis* must have originally been invented for the *ankle,* for there it has its true usefulness. While it is true that at the hip stiffening of the joint is not what we would most desire but is resorted to because it is imperative, yet at the ankle, with its nine joint surfaces, arthrodesis is often a procedure of choice. Perhaps you are all familiar with the operation. It is not applicable in children under seven. In those older the joint is opened, the articulating surfaces entering into the joint are removed with a sharp knife, and the bones are sewed together with stout silk.

The other boon to the surgery of paralysis came to us recently from Munich. I refer to the silk ligament. Lange discovered that, if heavy silk were inserted into the periosteum of bone, the periosteum would follow down the silk for a considerable distance. Using this phenomenon, he devised a means of adding short ligaments across joints that were enfeebled by paralysis of muscles playing over them. The principle is simply that that of reinforcing the ligaments of a joint by adding to them new structures closely akin to the original ligaments and so inserting them *that they limit the motion of the joint.* Let is be clear that the procedure makes no attempt to restore muscular power nor does it apply to any structure except the joint proper.

An ankle, for instance, is in equinus, the foot in toe-drop. The lower end of the tibia is exposed, as are also the tarsals in front of the ankle. Into the periosteum of the tibia is sewed some heavy prepared silk, which is often as heavy and coarse as grocers twine. A tunnel is made through the joint structures to the tarsals below where the silk is again inserted as tightly as is necessary to correct the toe-drop; and so the whole front of the ankle is strung with silk and the wound closed. In three months there will have developed around each silk strand a strong ligamentous projection from the periosteal attachment at either end, and we have produced therefor new ligaments at our pleasure, as long or as short, as many or as few as we wished. The results are highly satisfactory and we believe that upon the silk ligament much of our future success with these cases is to be based.

I have only time to outline some of the technic. The most important step is the preparation of the silk. At first large No. 10 silk, twice sterilized for thirty minutes, was used, but quite frequently this caused irritation. Then we resorted to silk boiled in corrosive sublimate which proved better but still caused some trouble at times, due probably to the capillarity of the silk. Lange later used paraffin after boiling in corrosive sublimate to fill in the spaces in the silk strands, and since the surgeon has adopted the paraffin method the silk has caused little trouble. In inserting the silk care is taken to pass it several times through the periosteum of the bones above and below and to so place it that the periosteum will have no difficulty in coursing down it. What we really induce is a grafting of the periosteum on the silk strand. Usually, now, the silk causes no irritation with ordinary use, and remains in the center of the new ligament indefinitely. Occasionally we have to remove a strand. I have used the method three years, and have had this experience but once.

In conclusion, in surgically treating a case of paralytic deficiency the great riddle always is to select *the one* procedure that will give the greatest amount of good for the longest time. The case presents itself and any one of the methods mentioned tonight might give temporary relief, but the aim of the orthopedist is to fit to the case *the one procedure* that will eventually prove the greatest blessing and at the same time be accompanied with the fewest drawbacks.

*FEDERAL MEAT INSPECTION.

By James C. Exline, M. D. V.
Inspector in charge,
WALLA WALLA, WASH.

The present system of federal meat inspection might well be termed a product of evolution. It is the result of many years of practical tests, of observation of Europeon methods, of stubbornly contested battles in the realms of science, of an almost hopeless though always insistent campaign of education.

Tuberculosis is the most prevalent infectious disease among food producing animals. Dr. Robert Koch, the eminent German scientist who discovered the baccillus of tuberculosis, unfortunately reached the conclusion that bovine tuberculosis was not transmissible to man. An immense amount of time and trouble had to be taken to overweigh this non-relenting opinion. This was accomplished and the scientific world won over, one by one, until today the upholder of the Koch theory places himself on the same plane with the man who doubts the efficacy of small pox vaccination or of antitoxin in diphtheria.

This was only one among many stumbling blocks that had to be removed before meat inspection could reach the level of importance on which it belonged. It was left to a writer of fiction, however, to really stir up the people and arouse public opinion. Public opinion is always a powerful factor. It may have had nothing to do with our recent meat inspection law, but it is a significant fact that soon after the investigation, Congress, in the act approved June 30, 1906, gave us a meat inspection law, to which in practical application and actual protection there is no superior.

No system of meat inspection could be efficient unless it provided for a close examination of the food animals just prior to and during their slaughter. The slaughter of animals for human food is but a branch of our great livestock industry. This industry in the United States, today, is essentially an agricultural industry. The various agricultural industries need fostering, regulating and protecting, hence we have the U. S. Department of Agriculture. Wisely did Congress impose the duties and responsibilities of our federal meat inspection upon this department. The direct enforcement of the meat inspection regulations devolves upon the Bureau of Animal Industry, a subordinate division of the Department of Agriculture. This bureau has in hand all matters pertaining to the livestock industry in all of its branches. The handling of the meat inspection force by any department or bureau not directly and constantly in touch with all other branches of the livestock industry would greatly cripple its efficiency. If the inspecting of meat and livestock now done by the Bureau of Animal Industry with one force of men should be divided between entirely different sets of employees, friction between these forces would be almost inevitable. Unavoidable overlapping of duties, conflicting orders and differences of opinion must necessarily cause confusion, greatly increased expense, and much needless sacrificing of results.

The aim of the federal meat inspection law is the protection of the people from the consumption of diseased and unwholesome meats and meat food products. It does protect them, *i. e.*, some of them. Unfortunately the scope of federal inspection is so limited that in many localities it is practically impossible to obtain U. S. inspected meats. In others it is a matter of more or less inconvenience. In the main, only those consumers who are alive to the vital importance of securing wholesome, healthful food, supply themselves with the government inspected product.

Meat Inspection Regulation 1 defines the scope of inspection as follows:

Section 1. All slaughtering, packing, meat canning, salting, rendering or similar establishments, except as hereinafter provided, the meat or meat food products of which, in whole or in part, enter into interstate or foreign commerce, shall have inspection under these regulations. The Secretary of Agriculture may exempt from inspection establishments operated by farmers, retail butchers or retail dealers supplying their customers, but in the absence of such exemption inspection is required.

Sec. 2. Branch houses of official establishments, when such branch houses are engaged in interstate or foreign commerce and slaughter animals or process meat, shall be considered a part of the parent house, and products received into such branch houses or sent from them shall be subject to these regulations, and inspection shall be maintained therein.

From these regulations it readily appears that federal inspection was established, primarily, for the control of products intended for interstate or foreign commerce. However, there is no difference in the handling of meat or meat food products in an establishment where federal inspection is maintained irrespective of the locality of intended distribution. The same care in inspecting and close supervision over the processing is given to the products for local consumption as to those shipments consigned interstate or abroad.

Before going into the inspection of meats in detail, it might be well to give you some idea as to the different classes of employees in the meat inspection service. These employees are selected through civil service from the country at large, without reference to, or even knowledge of their political or religious affiliations. A full description is given under Regulation 2. Organization of Force.

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*Read before the Walla Walla Valley Medical Society, Walla Walla, Wash., February 28, 1911.

Section 1, Paragraph 1. All permanent employees of the Department of Agriculture engaged in the work of meat inspection are appointed upon certification of the Civil Service Commission, that they have passed the examination prescribed by that Commission. Promotions in all classes are made on the basis of efficiency, deportment, and length of service. Such employees include:

Paragraph 2. *Inspectors in charge.* These are inspectors assigned by the Bureau of Animal Industry to supervise official work at each official station. Such employees report directly to the Chief of the Bureau of Animal Industry and are chosen by reason of their fitness for responsibility as determined by their records in the service. At stations where slaughtering is conducted, only veterinary inspectors are placed in charge.

Paragraph 3. *Veterinary Inspectors.* All applicants examined for these positions must be graduates of recognized veterinary colleges having a course of not less than three years leading to the degree. All final antemortem and postmortem examinations are conducted by veterinarians. At some stations the veterinarians are assisted in making preliminary examinations by trained laymen known as inspectors' assistants.

Paragraph 4. *Traveling veterinary inspectors.* To observe the conditions of sanitation of the establishments at the various stations, note the processes of antemortem and postmortem inspection, confer with and instruct inspectors regarding it, with a view to a uniform system throughout the country, and to report these matters to the Washington office, constitute the principal duties of these employees.

Paragraph 5. *Laboratory inspectors.* These employees possess technical training in microscopic and chemical examination of meat food products, and their inspections are conducted in laboratories located at various slaughtering centers. Pathologic laboratories are also maintained, to which diseased specimens may be sent when necessary for diagnosis.

Paragraph 6. *Meat inspectors* . These employees are laymen, experienced in the curing, canning, packing, or otherwise preparing of meat; they supervise that work and the use of permitted preservatives described in Regulation 22.

Paragraph 7. *Traveling meat inspectors.* These employees perform a service similar to that required of traveling veterinary inspectors, but along the line of the preparation and handling of meat products.

Paragraph 8. *Inspectors' assistants.* These employees are laymen, who are first assigned to routine duties and are promoted through examination to higher duties, such as assisting in conducting antemortem and postmortem examinations.

Paragraph 9. *Patrolmen.* Patrolmen are employed to patrol the establishments at night, to oversee the receipts and shipments of meat, and to observe any operations conducted at night. They consist of veterinarians, inspectors' assistants, or meat inspectors, according to the character of the work where assigned.

Paragraph 10. *Skilled laborers.* These employees supervise the marking of meat and meat containers, and perform similar work. They are eligible for promotion only through examination.

In the large packing centers where there are public stock yards, the antemortem inspection is done largely in the stock yards. Where this is not the case, each animal is given a careful inspection in the pens before it is allowed to enter the slaughter house. All animals in which the inspector detects or suspects disease are marked with U. S. suspect tags. The veterinary inspector who will pass on these particular carcasses on the killing floor is notified of the tagging in due time and is required to note the postmortem findings on the card used in common for both antemortem and postmortem inspection of suspects.

Each and every animal slaughtered is given a thorough, practical inspection and any abnormality is instantly detected. Upon the discovery of any lesion of disease or other condition that would render the meat unfit for food purposes, the carcass is marked with a numbered tag upon which is printed "U. S. retained." This carcass is then taken to the retaining room, a compartment set aside for this purpose exclusively. In the retaining room the veterinary inspector, detailed to this duty, makes a final inspection and orders the proper disposition. When lesions of an infectious disease are discovered on the killing floor, a stop is made at once until the hands of the butchers and the implements used on the diseased carcass are thoroughly cleaned and disinfected. Carcasses which have been inspected and passed are branded with the official number of the establishment and an abbreviation of the legend "U. S. inspected and passed." This branding is done by government employees or under their supervision and no house employee has access to these brands under any other circumstances. The Bureau of Animal Industry furnishes a non-poisonous purple ink which is used for this purpose.

Aside from the slaughtering of animals, all processing of meats or meat food products is constantly under government supervision. Reinspections are made from time to time by the meat inspectors and great care is taken that no products leave the establishment which have become sour, rancid, tainted or otherwise unwholesome. Such products as become unwholesome from any cause whatsoever are condemned.

All carcasses, parts or products condemned either on the killing floor or upon reinspection are tanked under the supervision of a bureau employee, and are thus absolutely denatured and rendered useless for any food purpose. A low grade grease used in the manufacture of soaps and fertilizer from the dried residue are the products obtained from the tankage. The tanks used for condemned products are securely sealed by the government employees, who break the seals. It is a misdemeanor for others to do so.

Regulations conforming to the most modern ideas of sanitation are constantly and uniformly enforced throughout all departments where edible products are prepared. Close attention is paid to the house employees to guard against the wearing of dirty clothing, the use of unclean implements or machinery, or the employment of persons affected with infectious disease. No expectorating is permitted except into spittoons which must be provided.

The use of false or misleading labels is prohibited and all trade labels must be submitted to and approved by the Bureau of Animal Industry, at Washington, before they are used. Statements of weight appearing upon labels must be absolutely correct.

The expense of maintaining the Federal Meat Inspection Service is borne by an appropriation by Congress of $3,000,000 a year. The only expenses of any consequence entailed upon an establishment by government inspection are the losses from condemnations and the maintaining of the required sanitary conditions.

During the fiscal year 1910 there were 49,179,057 carcasses inspected postmortem, of which number 113,742 were condemned and 74,180 were passed for lard and tallow only. In addition to these carcasses there were 874,211 parts of carcasses condemned. Upon reinspection 19,031,808 pounds of meats and meat food products were condemned because of having become sour, tainted, unclean, rancid or otherwise unwholesome.

Section 1 of Regulation 9, reads as follows:

Regulation 9—Bribery. Sec. 1. It is a felony, punishable by fine and imprisonment, for any person, firm, or corporation to give, pay or offer, directly or indirectly, to any Department employee authorized to perform any duty under these regulations any money or other thing of value with intent to influence said employee in the discharge of his duty under these regulations. It is also a felony, punishable by fine and imprisonment, for any Department employee engaged in the performance of duty under these regulations to receive or accept from any person, firm or corporation engaged in interstate or foreign commerce any gift, money or other thing of value given with any purpose or intent whatsoever.

As physicians you will probably be interested in a brief description of the routine of inspection at slaughter. By way of example, I will select the hog as to species, and circumstances and facilities as they exist at the local packing house operated under government supervision.

The hogs are shackled, hoisted to the rail, stuck and allowed to thoroughly bleed out. When life is extinct, they are dropped into the scalding vat. To this proceeding the inspector pays close attention, since, in case an animal is passed into the scalding vat alive, suffocation ensues and the carcass is condemned. The carcass leaves the scraping bench with the head partly severed from the body in such a manner as to make the cervical lymphatic glands readily accessible. These are incised and examined by the inspector and the carcass passed on the "gutter." The hog is opened up and the viscera spread upon a sanitary table. Here the inspector carefully examines the various organs, incising the lymphatic glands. He then gives his attention to the now completely dressed carcass. If it and its parts have presented no abnormalities or lesions which would warrant retention, it is passed forward for branding.

Upon being retained, a carcass is at once taken to the retaining room, where the veterinary inspector not only repeats the work done on the floor, but if there be any reason for so doing, exposes and incises all principal lymphatic glands of the body. As soon as the veterinary inspector has noted his findings upon cards furnished for that purpose, and indicated the disposition of the carcasses, those released are removed from the retaining room and the condemned carcasses and parts secured under lock in the condemned room.

Taking the position that one of the highest attributes of your profession is the practice of preventive medicine, I wish to urge upon you the necessity of supplementing federal meat inspection with efficient state and municipal service.

COURAGE ON THE PART OF THE GENERAL PRACTITIONER TO DEPART FROM FIXED RULES IN MEDICINE AND SURGERY.*

By J. B. McNerthney, M. D.
TACOMA, WASH.

Time was, and that not long ago, when the laity and not a few medical men thought it required great physical courage, more on the order of brutal force combined with a lion's heart and an eagle's eye, to make a good general practitioner or surgeon. However, the real courage required by the well-trained general practitioner or surgeon possesses that quality of mind which means coolness and presence of mind under all circumstances, calmness amid storm and clearness of judgment in moments of grave peril. "In its true and perfect form it is always associated with wide experience and intimate knowledge of various aspects of disease." (Osler.)

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*Read before Pierce County Medical Society, Tacoma, Wash.

We are apt to become fixed on a set of symptoms for any one disease. This is true of every profession, trade and walk of life, even to the longshoreman upon our own city wharf. The story is told of an old watchman who was warned by the stevedores and captains not to go beyond his beat or jurisdiction. One evening one of the captains, while under the influence of liquor, fell into the bay not far from the old watchman's beat and the captain cried in vain for help, rope or pole, but the watchman heeded not, and when asked why in heaven's sake he did not come to the captain's rescue, he assured them that it was beyond his jurisdiction.

Courage ought to be guided by skill and armed by knowledge. There are times when we apparently lack either, or at least we lack the courage to depart to any degree from many fixed rules in medicine and surgery. Oliver Wendell Holmes described the young practitioner well, when he said, "You know what to do for a child in a fit, for an alderman in apoplexy, for a girl that has fainted, for a woman in hysterics, for a leg that is broken, for an arm that is out of joint, for fevers of every color, for a sailor's rheumatism and the tailor's cachexy. In fact, you really do know so much at this very hour, that nothing but the searching test of time can fully teach you the limitations of your knowledge."

When put face to face with the vast unknown in medicine and surgery, we are all young practitioners, as it were, and to show you that we have limitations of knowledge and apparently lack courage and especially courage to break away from fixed rules, and so that I might depart from the usual fixed rule of copying entirely from text-books what you could have read for yourselves, I will cite a few cases from my own experience.

If the applicant for a license before any one of our state boards of medical examiners were to answer the question, "What is your treatment for gunshot wounds of the chest," and should that answer be anything but cleansed and sterile dressing applied and left alone, he would doubtless be given time to look up the subject. This is too general and not properly understood and often improperly employed.

Some years ago this was forcibly impressed upon my mind. One Fourth of July my patient received a close range bullet wound of the right chest at the level of the fourth rib. It took about the junction of lung and pleura as its course, pierced some lung tissue and made its exit in the back. The wound did not look bad, and after cleansing I applied a sterile dressing. He died of tetanus on the twelfth day. Postmortem showed a good sized piece of powder stained clothing imbedded under the pectoralis major muscle. Bullet wounds, especially at close range, should be opened and exposed to the air, at least until we trespass on dangerous anatomy and should always be followed by tetanus antitoxin.

The harm that has been done by certain uninformed adherents to the so-called "Rest and starvation treatment of appendicitis or Ochsner's method" cannot be told without opening a subject as bitter as politics. To show that it could have been and can be applied to the wrong disease, the following case will illustrate:

Dr. Thos. Piersall, of Bismarck, Wash., sent me a boy, age six years, who had been taken ill ten hours before. The attack began with severe abdominal pain, and rigidity of McBurney's point, and there was present quite a distinct mass, temperature 100° F. The parents and neighbors, who always assist in making the diagnosis, were sure it was not appendicitis and that it was an ordinary dysentery, as he was passing a little bloody mucus. Had not the doctor had the courage to encourage his immediate removal to St. Joseph's hospital and demanded an early and safe operation for his patient, when I unraveled some fifteen to eighteen inches of an intussusception, it doubtless would have been necessary to do an intestinal resection and the result might have been fatal. The enthusiast on Ochsner's treatment doubtless would have put this child on this form of treatment and learned the lesson that no fixed treatment can be applied to all cases. As it was, the lad left the hospital in perfect health on the fifth day.

Again, in disease or injury to abdominal viscera, we want to depart from any fixed rule and by all means avoid waiting classical symptoms. Last fall in football season I opened a young man's abdomen upon the history of the case, abdominal pain and rigidity. His pulse and respiration were normal and still, at operation, the jejunum, some fifteen inches from its origin, was torn transversely two-thirds across its convex surfaces. It was easily repaired and he made a perfect recovery. Before opening the abdomen, I was as certain from history, pain and especially abdominal rigidity that he had a perforation, as I would have been if it were an average case of appendicitis. In passing, I want to thank Dr. Wilmot Read, who saw the case and assisted me in the operation.

During the past year I have operated upon six cases of abdominal injury and, like the one described, every one showed a rupture of some important organ or viscus which, if left to nature, would certainly have died. To quiet my egotism, the other day, I got a lesson that is worth reporting. A strong and powerful man, a teamster, was run over by an express wagon. One of the wagon wheels passed over the left hypochrondriae region, well over the ribs. I saw him at St. Joseph's hospital one hour after the injury. The abdomen was not rigid over the region of the stomach, in fact it was rather depressed or hollow, and there was no vomiting at any time which should have given me a hint to the diagnosis. The left lung was absolutely devoid of breath sounds, even to bronchial breathing. I made a diagnosis of fractured rib, injury to the lung or pleura with hemorrhage into pleural cavity. Dr. Joseph Smeall saw the case and confirmed the diagnosis. In spite of the chest symptoms I had the operating room ready, and was preparing to open his abdomen, but when the time came and considering the chest symptoms, I lacked the courage to either enter the abdomen or the chest and waited developments. He died in a few hours. Postmortem showed a diaphragmatic hernia of the stomach into the left pleural cavity with a collapse of the left lung, accounting for the chest symptoms as described.

(a) If I had opened the abdomen it would have been an easy matter to have pulled the stomach into a normal position and repaired the rent.

(b) If I had opened the pleural cavity I would have drained the stomach of its contents.

Since I saw this case I have experimentally shown on animals that with a gastric, diaphragmatic hernia it is impossible for the animal to vomit for two reasons: (a) The stomach is strangulated and the perstalic wave is stopped. (b) There is an acute angle made in the esophagus.

The question of malignancy probably offers the greatest chance to error, and no fixed rule can be laid down, even backed up by a pathologist, and only the combined experience on the part of the general practitioner, surgeon and pathologist can tell which requires radical or conservative treatment. Rodman says, "Twenty years ago I felt sure that differential diagnosis between benign and malignant tumors of the mammary gland could be made with reasonable certainty. An increasing experience has taught me year by year, the fallacy of this opinion." Personally, I believe this is true of the uterus and other organs as of the mammary gland.

I recall a case in my early experience, a woman, age thirty-nine, the mother of three children. She had an advanced ulceration of the cervix. I was sure it was malignant. Dr. Armstrong of this city, who saw her in consultation, was inclined to wager against malignancy. One morning, at St. Joseph's hospital, we removed a good specimen for microscopic examination and at the same time did a high amputation of the cervix. The specimen was sent to Dr. Louis Wilson, of Rochester, and reported as malignant. The woman refused further surgery and remains well today—a period of five years. I doubt my ability to cure malignancy of the uterus by merely removing the cervix. We should not scoff at the apparently out-of-date practitioner who, as Osler says, has learned to use his eyes, and should also be charitable to the radical and thorough surgeon who probably removes healthy organs when the searching test of time shows that they were probably benign.

The medical profession, as a body, always has a tendency to copy rather than analyze and investigate each case on its own merits, and we are apt to take good authority's rule and apply it too generally without ever thinking of exceptions. For the past year Murphy's treatment of acute, general peritonitis, which no one doubts has saved hundreds of apparently hopeless lives, has been popular. Here he strongly condemns irrigation, yet Bevan puts it well when he says, "No one would doubt the advisability of washing beer and sauerkraut or weinerwursts out of the peritoneal cavity in a case of perforating ulcer of the stomach. Why should we not do the same for fecal pus or any pus?" Personally, I would lean toward Murphy's method, but a few times have broken away from the rule and removed large quantities of offensive pus that I know would have otherwise done harm, and patients did as well as by Murphy's plan of treatment.

And now, in conclusion, I have often wondered why some local medical men had the courage to attend what I may call the acutely sick, or that class of patients that give them worry, high mortality and poor pay—while, with the apparently well, clean surgery with low mortality and good pay, they recommend them to leave our hospitals and local surgeons. I believe I am not violating the oath of Hypocrates when I tell parents I have the courage to operate on their daughter for appendicitis when her abdomen is full of pus and every chance against her, and assure them that I have courage to operate on their son's rupture, with every chance in his favor with as much safety and assurance of permanent cure as any surgeon of national reputation.

Every city, town or village has had a physician or surgeon in time of need who possesses the courage to break away from supposed infallible rules. Even in the back woods of Kentucky, the genius and courage of McDowell came to the relief of suffering women and in 1809 he performed the world's first ovariotomy. When we picture his disadvantages, his operating room, really a shed, and our advantages of hospital and trained nurses, let us take him for our ideal and break away from many fixed rules in medicine and surgery.

THE IMPORTANCE OF EXACT METHODS OF DIAGNOSIS IN PATHOLOGIC CONDITIONS OF THE KIDNEY AND BLADDER.*

By George S. Whiteside, M. D.
PORTLAND, ORE.
Genito-Urinary Surgeon to Multnomah County Hospital.

In no field of surgery has greater progress been made in the last ten or fifteen years than in genito-urinary surgery. Nowadays no one disputes the advisability of exact methods of diagnosis. It is no longer necessary to explain to the internist or the general surgeon that the cystoscope is a practical instrument. Many are familiar with its use either in their own or some other's hands. The x-ray is also now a usual and frequently employed method in locating stones, foreign bodies or even tumors or abscesses. However, in spite of a general knowledge with these and other methods it is well, from time to time, to critically examine our results in order to ascertain the real value of our efforts.

Statistics show that where the surgeon extirpates one kidney without first making a scientifically accurate diagnosis, his mortality (if he be a good surgeon) will be about 40 per cent. If, on the other hand, he properly investigates his case his mortality will be about 15 per cent. If he be not a skillful surgeon, each of these figures should be higher.

Let us consider broadly the possible use of the cystoscope, or x-ray or any exact method of determining the sufficiency of each kidney. In bladder cases I wish to speak first of the diagnosis of cystitis. Fifteen years ago this was a very common diagnosis even in the genitourinary clinics. Now it is a designation used only to be modified or explained by some adjective.

A real case of cystitis came to me the other day. A man who had had a chronic gonorrhea and who lived in the country so that he was only able to see his physician once a week, was advised by his physician to buy a steel sound and pass it on himself. When sent to me by Dr. Meisner, of Oregon City, the patient complained of pain above the pubis, frequency and burning of micturition. He had been instructed to boil the sound and take other precautions against infection but the result was that he, not understanding the need of them, had not followed instructions. Examination of the urethra with the endoscope failed to show any disease but cystoscopy and microscopic examination of a catheter specimen of urine showed an inflamed bladder, containing urine loaded with pus, mucus and bacteria. Such plain, simple cases are not very frequent.

Usually the history is more like the following case. A woman, 45 years old, married, had had a distressing pain in the bladder for two years. She had consulted many physicians who had treated her for cystitis but she did not improve. Her urine contained pus and blood. A metal catheter could detect no foreign body in the bladder. I insisted upon a thorough examination under ether at the hospital. Cystoscopy at once disclosed the real condition. There were five phosphatic stones, which had become attached to the anterior and lateral bladder wall above the vesical outlet. The metal catheter did not discover them but they were plainly to be seen with a cystoscope. I removed these stones through the urethra. The patient made a complete recovery and has remained well since.

Another patient was a man 50 years of age who came down from Yacolt, Wash. He was treated in hospital for cystitis by a Portland physician. His urine contained pus and mucus. He complained of pain and frequency. The metal catheter failed to detect any stone. However, the cystoscope immediately brought a large stone into view. It was imbedded in a pocket in the posterior wall. Removal of the stone gave complete relief to the patient.

In still another case with pus and blood in the urine a very unusual condition was revealed. The patient was a young man sent me by Dr. R. C. Yenney, of Portland. He had had for many years a lichen planus. This was at times extensive and at other times almost completely disappeared. Cystoscopy showed several groups of lesions in the bladder floor resembling those of the lichen on the skin. Heroic doses of Fowler's solution caused their complete absorption. After that the pus and blood disappeared from the urine. The patient has had no return of the bladder symptoms since that time.

I also once saw condylomata of the bladder mucosa. I cannot give details of this case because the notes taken at the time have been lost. It would seem probable that syphlitic lesions of the bladder may be more common than is generally supposed.

The cystoscope is also of great advantage in determining the shape and size of the vesical outgrowth in senile enlargement of the prostate. Examination by the finger in the rectum tells but half the story. Before a prostatectomy is undertaken, cystoscopy is essential to a proper diagnosis of the intravesical conditions. I am sure, if it were employed more often for this purpose, carcinoma of the prostate would not so frequently be mistaken for simple hypertrophy.

In bladder tumors the advantage of a view of the tumor is evident. In many of the above conditions photographs may be taken of the interior of the bladder with the photographic cystoscope. These are sometimes valuable for diagnosis and are often interesting. I have a few lantern slides which show some of the conditions most easily photographed. In conditions of difficulty of micturition trabeculation of the bladder results.

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*Read at the meeting of the Spokane County Medical Society, Spokane, Wash., April 13, 1911.

Recently I received a reprint from Dr. J. D. Barney, of Boston, in which he says it is possible to differentiate between those trabeculae caused by obstruction to the outflow of urine and those caused by atony of the bladder or defective enervation due to tabes dorsalis or lateral sclerosis. In fact, he goes so far as to say that trabeculae appear in the bladder in a large percentage of ataxics long before the knee jerk is lost or the pupil sign can be elicited in the eye. Of this early sign I am not so sure, but it is a suggestion worth consideration.

In the examination of patients suffering from renal disease we must divide them into two general classes. First, those in whom there is some pathologic condition causing an abnormal condition of the urine and, second, those in whom the urine is unchanged, at least within normal limits. The first class is the most numerous. It is well known to you all that where one kidney secretes normal and the other abnormal urine it is easy to demonstrate this fact by ureteral catheterization. It is also easy to differentiate between a diseased kidney and a diseased bladder. In cases of unilateral renal affections this is of great importance.

We often hear some physician say that he has a patient with a pyelitis. Usually he means us to understand by this that his patient is passing urine containing pus, epithelial cells and casts. His designation is a broad one and covers a multitude of affections—tubercle, colon infection and various coccic infections. The patient may have pain in one or both sides. If so, it is presumed that the more painful side is the diseased one. This, however, is not an infallible isgn. Neither is it by any means always possible to discover that one kidney is larger than the other. Neither is the larger kidney always the diseased one. Sometimes compensatory hypertrophy causes the healthy kidney to become the larger of the two. Sometimes a cystic kidney or sarcoma or hydronephrosis causes a decided enlargement of the diseased kidney. So the safe rule is to insist upon a catheterization of the ureters in every case. In this way the amount and chemical characteristics of the urine from each kidney may be ascertained. If both kidneys are diseased this method may not convey to us sufficient information. Then the phloridzin test should be applied. This is not a new test, so it seems to me unnecessary to describe it except to say that in this way the functional activity of the kidney is very accurately measured. This is what we want to know. It answers the question as to whether the best kidney will do all the work if the worst one should be removed. In this way only can we safeguard our patients from inadvisable nephrectomy.

In suspected cases of hydronephrosis the size of the renal pelvis is of great importance. This can be judged of in two ways, either by injecting boric acid solution in known quantity until a colicky pain is produced or by filling the renal pelvis with a saturated solution of argyrol and then taking an x-ray plate. Of course such injections must be made through a ureteral catheter in either case. Each method is open to some objection as liable to error. Each has certain obvions advantages over the other. However, either way often elicits valuable information. The normal capacity of the kidney pelvis is 30-35 cc. More than this is abnormal and much more shows decided dilatation.

In pyonephrosis and in infected hydronephrosis (which is practically the same thing) we should try to ascertain the microorganism causing the infection. In a very interesting article on "Aetiologisches zur Coliinfektion der Harnwege," by C. Franke (Mitteilungen aus den Gunzgebieten der Med. und Chir. Jena, Vol. XXII, No. 4), he shows as the results of experiments on rabbits that the ascending colon and cecum are in direct connection with the right kidney through the lymphatics. In this way colon bacilli easily pass from the intestine, if there be any abrasion of the mucous lining of the cecum or colon. He also shows that the bladder may be infected by the microorganisms passing out from the kidney without having caused any trouble there. It seems to be a very reasonable explanation of frequently observed facts. The tubercle bacillus may also gain admission in the same way. Nowadays the large intestine is the fashionable avenue of many infections and toxemias. I have heard it stated by well known abdominal surgeons that man is better off without his colon. It sometimes seems as if our Creator made a great many mistakes in our make-up. Personally, I prefer to keep my colon and run the risk of local infection of bladder, kidney or general toxemia.

There is another class of cases in which accuracy of diagnosis is of paramount importance—the various sorts of calculi. We have "sand," "gravel" and stones in kidneys, ureter or bladder. In renal stones or ureteric stone it is of great help to the surgeon to know how many calculi there are and where they are situated. In a recent case of my own the symptoms pointed to a calculus on the right side. The ureteral catheter showed it to be 5 cm. above the lower end of the ureter. The x-ray showed distinctly two stones. The larger one was below and the smaller one could not pass it. Had I not had evidence of the exact position and number of stones the operation for their removal would have been more extensive, more hazardous and I might have missed the smaller stone, which was very small. This, I think, illustrates my contention of the importance of exact diagnosis in such cases.

In tubercle the cystoscope and phloridzin reaction gives us the extent of damage and accurately defines the regions involved. Primary tubercle of the bladder is rare, primary renal tubercle is common. The disease may, if in the kidney, involve one side and not the other, or, what is more usual, it may have advanced further on one side than on the other. For good results from surgical or other treatment it is essential to determine the extent of disease. If both kidneys are far gone in tuberculous destruction surgery offers no cure. These axioms you all know but one must sometimes repeat them. Also, where pulmonary consolidation exists, either as the primary affection or as secondary to renal tubercle, operation upon the kidney will only hasten the patient's death. The only exception to this rule is where both ureters can be proved to be almost or quite occluded from tuberculous thickening. In such rare cases nephrotomy saves life, at any rate for a time, by giving free drainage. This is a point easily demonstrated by means of the cystoscope and ureteral catheter. Such cases are, however, rare except as seen at autopsy. Calculi sometimes form in the pelvis or calyces of a tuberculous kidney. The x-ray easily shows their number, size and position. These facts are always necessary for proper treatment of the case. They are not points of mere scientific interest to the surgeon, they are essential to further the best interests of the patient. If this be properly explained few patients will refuse the extra expense or apparent delay of such examination as is needed to investigate the case. Renal tuberculosis is a favorite subject of mine. I could talk of it at greater length but the time allotted for this paper does not allow of it.

In tumors involving the kidney itself much may be gained by a comparison of the separated urines obtained by ureteral catheterization. In hypernephromata this is less often the case. Albarran states that the methods of examination to be employed should include collection of the urine from each kidney for at least two hours. Note the quantity, the freezing point and the chemical composition. At least an hour previous to the time the collection of urine is begun inject subcutaneously 1 cc. of a 5 per cent. solution of methylene blue. At the time of beginning the collection inject also 2 centigrams (about ½ gram) of phloridzin. In this way the functional activity may be judged both by the appearance of the blue and also by triturating the urine for sugar with a Fehlings solution. It is above all essential to compare the quantity of solids excreted per litre of one side and the other. If no note be taken of the quantity per litre, then a kidney which may be much damaged and actually or low functional activity but which lets water pass so that an unilateral polyuria exists, may not be correctly judged. Such cases are not infrequent, especially when interstitial changes have taken place in the kidney. The two kidneys very seldom secrete equal quantities and this is especially true when the time of collection is short. Two hours should be the minimum.

These methods of examination I have mentioned tonight are the tried and true ones. There are many others, either still in the experimental stage or which have had vogue only for a time. Among the latter may be mentioned cryoscopy of the urine or of the blood, that is, the determination of the freezing point of the fluid examined. I mention it only in passing because, although much was expected of it ten years ago, now I believe it has been largely abandoned. The error of the determination of molecular density by cryoscopy lies in the fact that too many factors may influence the result obtained. However, it is easy to see that, where this method is applied to the comparison of the separated urines collected from the two kidneys simultaneously, such error loses its power of vitiating the result. Whatever general conditions contribute to a more or less abnormal molecular concentration in one kidney are actively influencing the other kidney also. Consequently, the determination of this index is of distinct value in the comparison of two ureteral catheter specimens collected at the same time.

In quite another class is the determination of the blood pressure. This has been for many years considered of great importance in renal diseases and never more so than at the present time. Formerly the quality of the pulse to the physician's sensitive touch was the method relied upon. Now various mechanical devices render blood pressure a more accurate evidence than ever before.

In thus speaking of the value of special forms of examination, I do not wish to minimize the importance of older and more general methods. The history, general physical examination, subjective and objective symptoms are of such evident use that they should be relied upon as formerly, but we have the added advantage of these more scientific aids to diagnosis in addition to the older ones. Let us not be like the student who told me in the genitourinary clinic that he had examined the urine, sputum and blood but that he could not make a diagnosis until he had read the blood pressure and examined the feces under the microscope.

Nor do I wish to neglect the bacteriology of pathologic urines. It is of vast importance and I have already briefly referred to it in bladder cases. It is equally of value in renal infections. Often it guides the treatment, which may be the administration of so-called vaccines. I have not tried to explain any methods of treatment but only to try to outline to you, as stated in my title, the importance of exact methods of diagnosis.

THE PRACTICAL TREATMENT OF ACUTE MIDDLE EAR AND MASTOID DISEASE.*

By Ralph A. Fenton, M. D.,

PORTLAND, ORE.

Elaborate details of the anatomy, etiology and therapeutics of ear diseases are to be found in many works and it would be of little interest to recapitulate the statistics of great clinics. Thus, with the proviso that no compendious examination of this subject will be attempted, we wish merely to recall to you certain points in the practice of every day.

Cases seen here commonly arise from a coryza or from a chronic nasopharyngitis—"acute cold" or "nasal catarrh" so-called, in which infectious particles enter the Eustachian tube during swallowing, coughing, blowing the nose or clearing the pharynx of mucus. These germ-laden particles carry their irritant and inflammatory action along the tubal mucosa at a speed varying with the virulence of the toxin and the force of their introduction, producing exudation and swelling, with consequent pain and dulness of hearing and the added danger of infection of the accessory cavities about the ear drums. Most potent agents of such invasion are the toxins of scarlet fever, measles or diphtheria, especially in the presence of adenoids. A rather common type is attributed to the entrance of water into the external auditory meatus while swimming, but comes more probably from expulsive efforts at clearing the nose and throat at such times, with resulting Eustachian involvement.

The laity proceed to blow tobacco smoke in the troublesome member or pour it full of laudanum and sweet oil; and sometimes it gets well. But sometimes it does not. What are we to do when such cases come before us?

The whole matter of treatment may be summed up in three words—immediate, free drainage. But we must know what to drain and how and when to do it. When the process has not passed beyond the Eustachian tube a simple inflation by Politzer's method often suffices to clear the hearing and allow the products of inflammation to return to the throat. But discretion must not be exceeded by blowing these products further into the ear. This is a real danger, which should limit the employment of this measure to the specialist.

The tympanic membrane must be examined by reflected light with a head mirror and speculum, a process with which all physicians should be familiar. The normal, pearly gray with sharp light reflex will be found, according to the stage of the ailment, to become pink, reddish or blood-hued, with a gradual obliteration of the usual landmarks and bulging of the mobile parts of the drumhead.

With a mild reddening, much relief is often had by instillations of hot sweet oil, as commonly used; hot glycerin is better, often carbolated slightly for its analgesic effect. Occasionally irrigations with hot boracic acid or 1-10,000 bichlorid of mercury solutions are useful in this stage. But with much pain, redness and swelling, the ear-drum should be opened at once, and the retained serum or pus evacuated. This operation is harmless, and its results are immediately and finally good.

Paracentesis of the drum membrane is rarely made less painful by any local anesthetic, but is fortunately instantaneous if rightly done. The point of greatest swelling is usually incised, with due care to avoid important intratympanic structures; the cut lies most often in the posterior and inferior quadrant.

The discharge that follows, serous at first, in some cases thick and purulent very early, may be removed if copious by syringing gently with a soft-nozzled rubber bulb and warm solution. Hard syringing only endangers results by driving the discharge deeper in. In most cases, therefore, we find that removal of the secretions, by mopping them out with long cotton wicks twisted on fine applicators or toothpicks will promote earlier healing. A discharge may be overlooked by those caring for the patient unless so copious that it runs out in sight. The ear should be kept dry. The discharge shares many of the characteristics of acute nasal exudates: first serous or blood-stained; later mucoid, and purulent as the internal epithelial destruction and leucocytosis progress. Often a few days or weeks will see the pus diminish as it is carefully removed, without the opportunity of putrefying in the ear. It reverts to mucus, then to serum; then disappears with healing of the wound in the drum. Occasionally with imperfect cleansing or very severe infection sloughing may leave a perforation, but this happens far oftener when spontaneous rupture is permitted.

Responsibility for all complications rests squarely with the doctor in charge. They may be averted with comparative ease, if watched for. In passing, it may be noted that certain ill-defined febrile states in infants, "teething" included, may be due to undiagnosticated middle ear infection, leading on even to meningeal involvement or to resolution with more or less permanent loss of hearing. And, conversely, at times an acute infectious disease like measles begins with an otitis in which the fever fails to fall after paracentesis, diagnosis being certified by appearance of the rash.

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*Read before Portland City and County Medical Society, Portland, Ore., Dec. 1910.

Care of these cases reaches a difficult stage if, owing to the suddenness or virluence of an attack, or to delayed drainage or improper treatment, the disease reaches the mastoid cells. Recovery may follow without operation, but the hideous dangers presented by pus germs burrowing unseen, often within a millimeter of the brain, should never be forgotten. In fulminant types of infection the most extensive invasion my be only a matter of a few hours. Do not temporize in such an event; if there be tenderness on deep pressure directed toward the mastoid process, the general practitioner should share his responsibility with some one who is prepared to attack the difficulties of operation. A few conditions simulate mastoiditis, but are excluded by careful analysis; for example, the excruciating pain of furunculosis in the external auditory canal. Slowed pulse with relatively high temperature, neck stiffness or tenderness, local edema or redness, sudden cessation of an established discharge, all these are significant of evil.

It is far better to have the mastoid skilfully opened, with obliterations of its infected bone-cells and immediate relief from agonizing pressure, than to expect a little slit in the turgid ear-drum to release the slimy discharge from a square inch more or less of inflamed mucosal surface, oozing slowly through tortuous channels. Invariably, if taken in time, such acute mastoid cases, freely evacuated, draw all the pus into the dressing behind the ear, pain departs, symptoms of prostration and pressure disappear, and the middle ear is dry through the meatus in a week or less; the bone wound closes solidly in but a few weeks.

Is not this to be preferred to delay with inefficient drainage until chronic otorrhea results, or until pressure unrelieved causes invasion of the meninges, the lateral sinus, the facial nerve or the labyrinth? It may be said that facial palsy, meningitis or brain abscess of acute otitic origin can be avoided in practically every case by early recognition of the possibility of such complications, and watchful expectancy with early drainage.

What practical bearing have these facts? Simply that the practitioner has the power to reduce very greatly the number and the severity of ear infections. His watchfulness will guide his patients in the early removal of adenoids—spongy masses saturated with filth, ready to infect the Eustachian tubes adjoining them; and infectious tonsils or recurrent attacks of rhinitis must be cared for. The commoner sorts of acute ear inflammation need the most attention, because they are common, and do the most damage in the aggregate.

Because a certain number of cases with symptoms referable to the mastoid recover from the acute attack with almost no care, we must not deny such cases as we see all the benefit of our greatest vigilance. Understand the condition. Keep abreast of the diagnosis. Do not say, "Oh, it's just a running ear!" and risk condemning the patient to carry a powder magazine in his head, needing only his lowered resistance to explode. If the physician be unwilling to say to himself, "I fully understand the symptoms of this case," it is not only morally right but surgically common sense for him to shift the responsibility. Judgment in these instances must be closely guided by experience. For example, children in collapse after an exhausting battle with the toxins of scarlet fever can rarely be subjected at once to the renal, cardiac and pulmonary hazards of the anesthetic. But if the operative indication be strong, better far to risk the anesthetic, even in such last-resort cases, than to risk permanent deafness, facial paralysis, labyrinthine vertigo or death.

THE TREATMENT OF HEMORRHOIDS WITH THE REPORT OF A NEW OPERATION.*

By J. Earl Else, Ph. G., M. S., M. D.
PULLMAN, WASH.

In order to properly present the subject of the treatment of hemorrhoids it is necessary to briefly review the anatomy of the rectal region and the pathology and etiology of this condition.

The rectum like the rest of the bowel has four coats, serous, muscular, submucous and mucous. The serous coat extends from above downward over tho first two portions on the anterior surface and over the first portion on the posterior surface. On the sides only that portion is covered that lies above a line that is drawn between these two points. The muscular coat consists of two layers both being thicker than on the bowel above. The outer or longitudinal layer surrounds the rectum, being thicker on the anterior and posterior surfaces where it forms two bands. The inner or circular layer is thickened below where it forms the internal sphincter. The submucous coat consists of loosely arranged fibroelastic tissue and contains the bloodvessels. This is the most important coat from our present view-point. The mucosa is thicker, darker and more vascular than is that of the colon. When the rectum is empty longitudinal folds are seen below with three or four transverse folds above. The former disappear upon distention but the latter, known as Houston's valves, are constant.

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*Read before North Idaho District Medical Society, Boise, Ida., Jan. 9, 1911.

The arterial supply is principally through the superior hemorrhoidal branch of the inferior mesenteric artery which, dividing into two branches, passes down on either side of the rectum to about five inches above the anus. Here they divide into six branches, pierce the muscularis and pass down in the submucous layer. These give off branches which, anastomising with each other and with the middle hemorrhoidal branch of the internal iliac and the inferior hemorrhoidal branch of the internal pudic, form a series of loops about the lower portion of the rectum.

Situated in the submucous layer about the lower end of the rectum is the hemorrhoidal plexus. It consists of many small venous sacs intimately connected. From these usually about six veins pass upward for about five inches, where they pierce the muscular coat and unite to form the superior hemorrhoidal vein which empties into the inferior mesenteric a branch of the portal vein. These veins have no valves. The hemorrhoidal plexus communicates with the general venous system through the middle and inferior hemorrhoidal veins.

Anatomically man is predisposed to hemorrhoids because of, first, his upright position; second, the long, fairly straight veins without valves leading from the rectum to the liver; and, third, the fact that the veins have to pass through the small openings in the muscularis. This arrangement may serve as valves as claimed by Allingham but, as pointed out by Verneuil, when the muscular walls contract as in peristalsis the veins are constricted if not occluded, while the arteries with their thicker walls are not affected, hence the blood is forced into the engorged hemorrhoidal plexus with each beat of the heart.

In order that hemorrhoids may be formed there must be either a reduction of the tone of the vessel wall or an increase of the blood pressure to the part or both. The first is the result of improper nourishment of the part and may be due to improper assimilation of food, improper food, blood dyscrasias, lack of exercise, wasting diseases, etc. Increased blood pressure may be due to sudden interference with the return flow, such as in a strain or in severe muscular exertion as by laborers or athletes. Or it may be due to a decreased arterial pressure with a consequent increased venous pressure occurring in certain cardiac affections or in a weakened circulation due to insufficient exercise or wasting diseases. Increased blood pressure to the part may be caused by anything that increases intra-abdominal pressure or interferes with the return flow, as abdominal tumors, liver disease, pregnancy, uterine displacement, tight lacing, constant standing on the feet, sitting and bending forward as over a desk, straining at stool or any interference with the portal circulation.

Anatomically hemorrhoids are classified according to their relation to the external sphincter as external, internal or mixed. External hemorrhoids lie external to the sphincter and are covered with skin. Two varieties are found: first, venous hemorrhoids in which the external hemorrhoidal plexus or subcutaneous veins about the anus are involved. They may become inflamed when they are known as inflamed external hemorrhoids or there may be coagulation of blood either within the vein or after it has escaped. This condition is known as thrombotic, external hemorrhoids. Second, cutaneous or connective tissue hemorrhoids. These are tags of skin containing connective tissue within and may result from resolution and absorption taking place in a previously inflamed or thrombotic external hemorrhoid or is a hypertrophy resulting from local irritation in which case it is not a true hemorrhoid.

Internal hemorrhoids lie above the external sphincter. They are of two varieties, capillary and venous. The former are made up of arterial capillaries, are bright red in color, slightly raised but not palpable, and disappear upon pressure. They bleed easily. These are the so-called "blind, bleeding piles."

The venous hemorrhoids start as a dilation of the little sacs found in the superior hemorrhoidal plexus; connective tissue is formed as the result of irritation or inflammation and the veins become distended and saculated until, as Tuttle remarks, they are "veritable angiomatous tumors." These may become inflamed or thrombosed like the external variety or may when large extend through the external sphincter and become strangulated.

This review has been rather long but will, I believe, place us in a better condition to consider the treatment. The treatment its prophylactic, paliative or operative.

Prophylaxis should begin with infancy. The baby should have at least one movement daily and as soon as the child is old enough it should be taught to have a time each day when the bowels move. When mothers learn the importance of this they will have gone a long way not only toward the prevention of hemorrhoids but also other ills and ailments to which human flesh is heir. One should not sit long at stool, not over two or three minutes at the outside.

If much straining be required to evacuate the bowels, an enema of cold water may be taken or olive oil if the movement be hard and dry. When the bowels need regulating drastic cathartics should not be used but instead milder preparations or enemas. The bowels can often be regulated by the use of certain vegetable food substances such as oat meal, or agar may be added to the breakfast food. When these fail dilation of the rectum is often efficient.

Proper exercise should be had, care being taken not to subject ones self to sudden, severe or prolonged strain. Diet should be plain and wholesome. omitting rich pastry and highly spiced foods, wines, liquors, and midnight suppers. Excessive venery is to be avoided. Early attention should be given to any pathologic condition that predisposes to hemorrhoids. Tight lacing must be forbidden. To recapitulate, the three most important factors in the prevention of hemorrhoids are regular bowels, proper exercise and proper diet.

Palliative treatment. The object of palliative treatment is to relieve symptoms and prevent complications. They can not be expected to cure after true hemorrhoids have once been formed. If the condition be producing much annoyance, the patient is put in bed for a few days so as to reduce the blood pressure to the part, limit the amount of mechanical irritation, and improve the recuperative powers of the patient. If there be much inflammation and pain apply either hot or cold applications according to which gives the patient the greatest relief. If strangulation be present, heat is the most efficient, as it serves to relax the muscle. The opium and lead wash may be applied or an ointment similar to the following:

℞.

Cocainae hydrochloratis.....	1.
Mentholi	.8
Ex. Opii	2.
Lanolini	30.

Sig.: Apply to hemorrhoids.

In internal hemorrhoids I sometimes substitute oleum theobromatis for the lanolin and have it made up into suppositories.

If hemorrhage occur, expose the part and touch the bleeding point either with some chemical, of which I prefer the silver nitrate stick, or with the actual cautery.

After the patient has so recovered that he is able to be up he is instructed to be regular in his habits, use discretion in his diet, take proper exercise and above all to keep the bowels so regulated that he will have one or two semisolid movements daily. The object of the treatment is to improve the tone of the vessel walls and reduce the blood pressure to the part.

The operative treatment varies with the kind and location of the hemorrhoids. Cutaneous hemorrhoids do not require treatment unless they become frequently inflamed or interfere with the peace of mind of the patient. Then they may be removed under a local anesthetic. Care must be taken to see that the growth is removed down to the level of the skin so that a stump will not be left. Inflamed external hemorrhoids require palliative treatment. Thrombotic external hemorrhoids should be opened, the clot evacuated, the cavity cleansed with antiseptics and packed with sterile gauze. Capillary hemorrhoids require cauterization with either chemicals or actual cautery.

Cauterization, with the exception of its use to check hemorrhage, is a procedure with which I have had no experience. It does not appeal to me. The same may be said of electrolysis. The crushing operation, as advocated by Pollock and Allingham Jr., is efficient in small hemorrhoids but inferior to other methods. This also applies to the ligation without excision and the submucous ligation methods. The ecrasuer method used in France is inaccurate. The injection method is mentioned only to be condemned.

The two most useful methods are the clamp and cautery and the ligature method, as advocated by Allingham. The clamp and cautery method is the easiest, simplest, and most rapid method and for hospitals I believe the best for cases in which the hemorrhoids are not so extensive that it would require the sacrifice of so much tissue that stricture might follow. The operation should never be done, however, except in hospitals having resident physicians, as there is danger of hemorrhage. Personally I have never seen a hemorrhage following this operation but it has occurred in the practice of some of the most careful surgeons.

Next to the clamp and cautery comes the Allingham or ligature operation. I believe this to be the safest. If Allingham's directions are followed, there is practically no danger in cases where this operation is suitable but, like the clamp and cautery method, it is not the method of choice in the cases of extensive involvement.

Referring again to the anatomy and pathology, we find that the venous hemorrhoids are primarily an involvement of the submucous layer. After becoming enlarged they extend into the bowel as the resistant muscularis prevents their extention externally. In this process the mucous membrane becomes stretched and, if much inflammation attend the condition, may become adherent to the tumor. Up to the present time no operation has been reported by which the entire hemorrhoidal bearing area could be removed without destroying more or less of the mucous membrane. It was to accomplish this that I devised the operation that I wish to report. In reporting it I shall also give the details of the treatment both before and afterward.

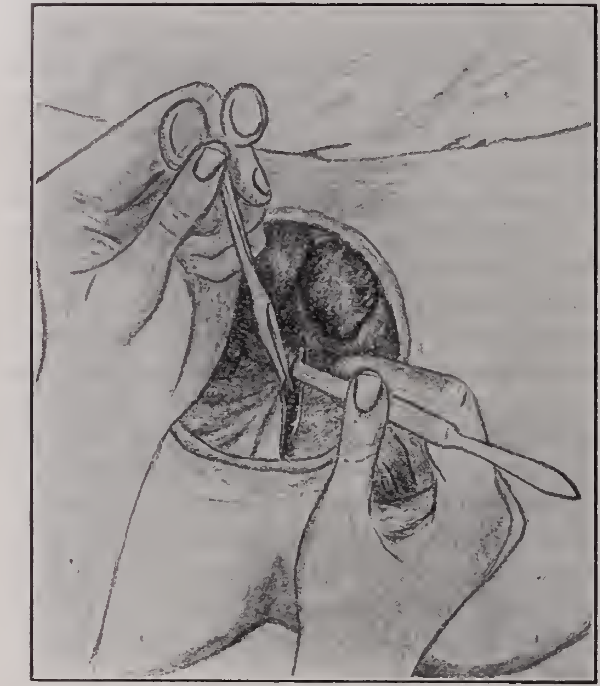

Fig. 1.
First step in operation. The hemorrhoid is pulled outward and downward and incision made from one-half inch above its base to the summit and then the hemorrhoid is lifted up and the incision is continued to the muco-cutaneous border. The incision is elliptical at the summit of the hemorrhoid.

The patient is given one-half grain of calomel every fifteen minutes for four doses the night before. Four hours before the operation one-half ounce of magnesium sulphate is given and one hour before, a large high enema. The parts are shaved. On the table the parts are scrubbed with soap and water, then alcohol and bichlorid. The patient is anesthetized with ether. The rectum is now gently dilated, using first the forefingers, then the thumbs and lastly the fore and index fingers. After washing out the bowel with 1:5000 bichlorid, the center of the posterior quadrant is seized at its apex with forceps and an incision made from one-half inch above its base to the muco-cutaneous line (Fig. 1). This incision is made eliptical at the summit of the hemorrhoid, in order that the edges of the mucous membrane may fall together after the dissection. The mucous membrane on one side is now seized with an artery forcep at about the center of the incision and, by producing slight traction upon the forceps, with the handle of the scalpel the mucous membrane is freed from the hemorrhoidal mass for about one-eighth of the circumference of the rectum (Fig. 2). The same is now done upon the opposite side, after which the hemorrhoidal bearing area is dissected from the muscularis, ligated and removed (Fig. 3). After all has been removed that can be reached through this incision the mucous membrane is closed with a continuous suture. The suture is of chromic catgut No. 1 and extends into the muscularis in order to obliterate as much as possible of the space between the

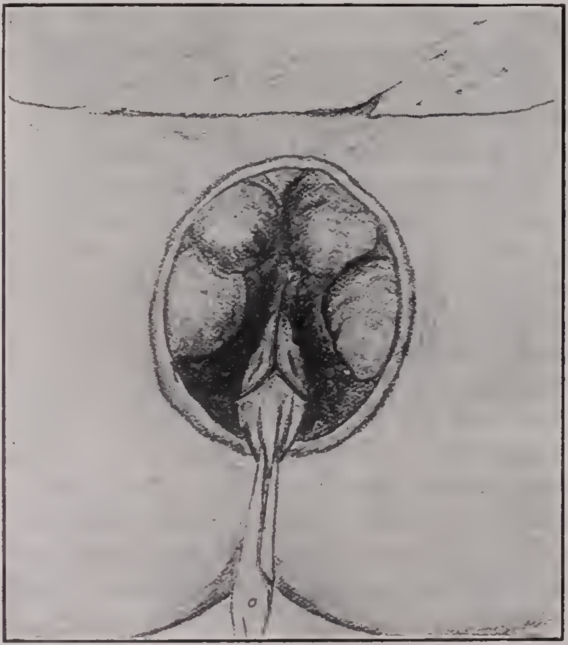

Fig. 2.
Through the incision made as shown in Fig. 1, the mucous membrane is dissected up from the hemorrhoidal bearing area over the whole of the posterior quadrant.

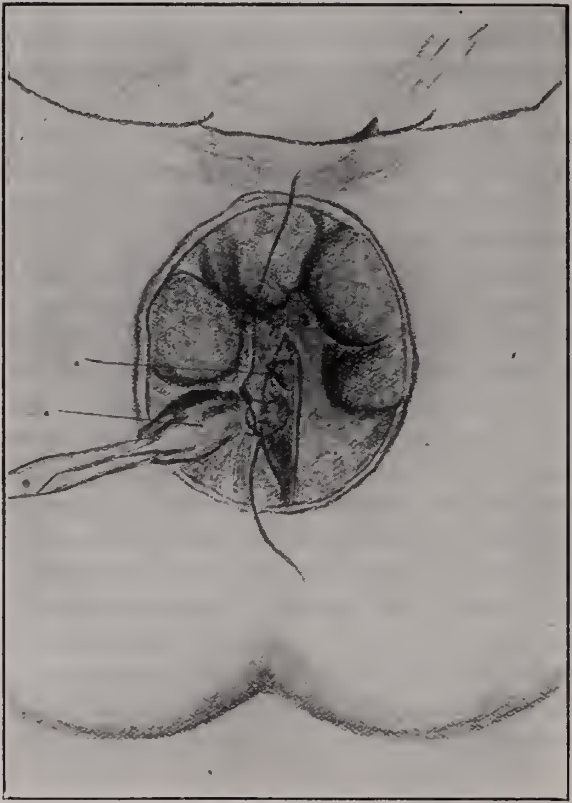

Fig. 3.
The hemorrhoidal mass is dissected up from the muscularis, brought out through the opening in the mucous membrane and ligated are removed. A—Stump left after ligation and removing a part of the hemorrhoidal mass. B—A portion being ligated.

two coats (Fig. 4). The lateral quadrant having the largest hemorrhoidal mass is now attacked in the same manner, then the opposite side and the anterior quadrant last. Often three longitudinal incisions are found sufficient (Fig. 5).

After the operation is completed a simple dressing is placed over the rectum and retained with a T binder. I never pack the rectum. On the evening of the second day two grains of calomel are given in divided doses and the next morning one dram of magnesium sulphate every hour until the bowels move. The movement is preceded with an enema of olive oil. After this a semisolid movement is obtained daily.

During the past three years I have done this operation several times and have yet to see an imperfect result. Healing is slower than with some of the methods with less trauma. The advantage which I claim for this is that it removes the whole of the hemorrhoidal bearing area without sacrificing any of the mucous membrane, something that is done by no other operation. The three most important things to be remembered in performing this operation are first, careful selection of cases (it should be used only in bad cases); second, careful dissection and removal of the hemorrhoidal bearing area, and, third, absolute hemostasis. Without the latter hemorrhage occurs between the mucosa and muscularis, separating them and infection might follow.

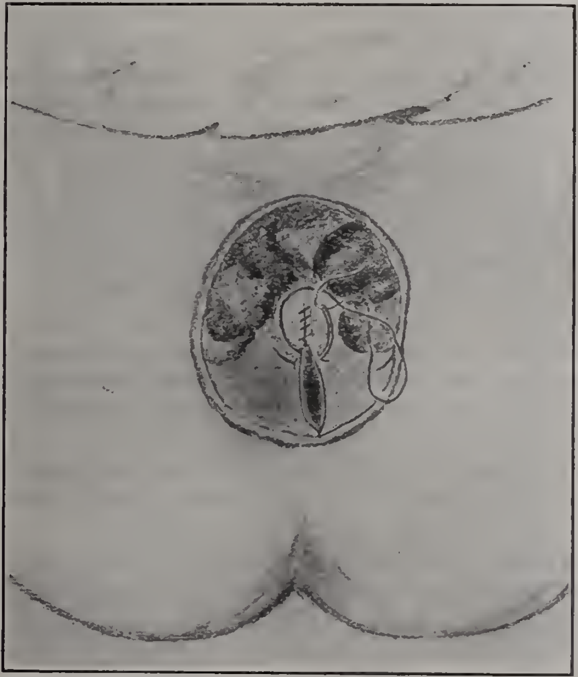

Fig. 4.

After removal of the hemorrhoidal mass the incision in the mucous membrane is sutured with No. 1 continuous chromic catgut suture. This suture includes some of the muscle fibres in order to aid in obliterating the space between the two coats of the bowel.

SARCOMA OF THE CHORIOID.

By Robert L. Nourse, M. D.

BOISE, IDAHO.

Sarcoma of the chorioid is a rare affection, notwithstanding it is by far the most frequent of all neoplasms involving this structure. A case recently occurring in the writer's practice presents some points of interest which we believe make the case worthy of reporting. Before doing so, however, we will briefly review the subject of these growths in a general way.

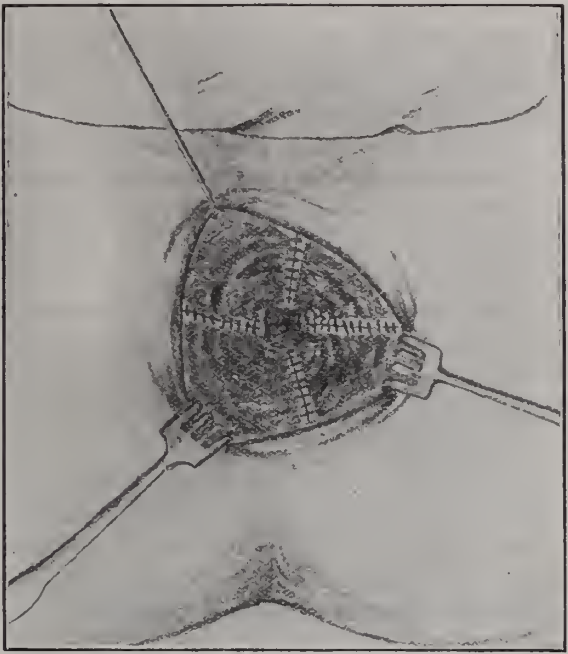

Fig. 5.

The other quadrants are treated in the same manner.

Etiology. Most authorities agree that heredity has no particular influence in its causation. Fuchs found a history of injury in eleven of a series of twenty-nine cases, but attached no special significance to this fact. According to his observation, inflammatory conditions, especially if prolonged, appeared perhaps to have more influence in its etiology.

Age appears to predispose to it, as by far the greatest number of all cases occur after the fortieth year, and it is very rare indeed before the twentieth. Eberbach reports statistics of fifty-five cases, the average age being forty-eight years. It is extremely rare in childhood.

Sex. Men are more often affected than women, and the left eye more often than the right.

Pathology. The growth is usually circumscribed, and of spheroidal form as long as the chorioidal capsule remains intact. Sometimes it assumes a pediculated or mushroom shape. Rarely it may be diffused or flattened.

Sarcoma of the Chorioid is, in nearly every instance, a primary growth; very rarely indeed is it due to metastasis from sarcomata of other organs and tissues, though it is prone to cause metastasis to other parts. It develops from the outer layer of the chorioid, which is a vascular tunic, and grows inward, causing detachment of the retina.

Histology. Sarcoma of the chorioid may be round-celled, spindle-celled or a mixture of both. It is usually pigmented—melanosarcoma, while about one in eight, according to Rockliffe, are non-pigmented, i. e., leucosarcoma. Fuchs found in one hundred forty-seven cases, sixty-five were spindle-celled, forty round-celled, twenty-eight mixed, eight fibrosarcoma, three myxoma, and three chondromas.

Course and Symptoms. Four stages characterize the development of chorioidal sarcomata.

First. The quiescent or pre-glaucomatous stage, in which there is little or no indication of its presence. If an ophthalmoscopic examination of fundus is made during this stage, while the media are still clear, a small yellowish elevation may be seen, which resembles a slight detachment of the retina. This stage may last for six to twelve months and, in rare instances, may be prolonged to five years.

Second, or glaucomatous stage, is characterized by all the symptoms of inflammatory glaucoma, i. e., increased tension, pain, hazy media, steamy cornea, etc. Cataract of the lens develops in the later stages, and the, at first, localized detachment of retina becomes general, due to serous effusion, and ophthalmoscopic examination is no longer possible. As the growth continues, the sclera becomes thinned and ruptures, ushering in the

Third, or extra-ocular stage. Tension and pain are now relieved, but the rapidity of the growth increases, quickly involving the surrounding orbital tissues, optic nerve and brain. Coincident, or very shortly thereafter, the

Fourth, or metastatic stage, supervenes, and distant organs are involved. The liver is generally first attacked, next the lungs, and other organs.

Death is much more frequently due to metastasis than to local extension or by recurrence after removal. Metastasis may occur prior to rupture of the sclera, even during the first stage.

If perforation of the sclera takes place along the ciliary vessels, or near the equator of the eye-ball, the character of the tumor, which is usually melanotic, may be readily diagnosed but, when it occurs farther back through the posterior pole of the eye, its true nature may be difficult to determine until the exophthalmus from the growth of the tumor becomes pronounced.

Diagnosis. This may be difficult or impossible during the first or quiescent stage. The discovery, during an ophthalmoscopic examination of the fundus, of a small, yellowish circumscribed elevation, resembling detachment of the retina, but without accompanying hemorrhage, or history of injury, should be regarded with suspicion, especially if the patient be past forty years of age. If such a growth be found in a very young child, the probabilities of its being a glioma must be considered.

Prognosis. As Fuchs states, the prognosis of sarcoma of chorioid is absolutely bad for the life of the patient, if the eye be not removed early. But even then the prognosis is by no means always favorable, since metastasis may occur during even the first stage.

Enucleation of the eye results in a cure in twenty-five to thirty per cent. of cases, though statistics vary greatly in this respect. Hirschberg found local recurrence in 2.5 per cent. metastasis in 41.5 per cent., and a cure in 56 per cent. If metastasis has occurred, it generally shows up within two years. It is rare after the fourth year, but has been known to develop as late as seven years after removal.

According to DeSchweinitz, the stage at which enucleation is done does not certainly influence the probability of metastasis, but most observers differ with this view, and urge enucleation at the earliest moment diagnosis can be made.

Report of Case.

Mrs. S., aged 43, called me to see her August 29, 1910, when the following history was obtained. Three years ago, she first noticed a blurring of the vision of the right eye, and the temporal field of vision was blotted out. She visited an optician and had glasses fitted, which seemed to help some. One year later vision failed in that eye, and she consulted an oculist in Denver, who made a probable diagnosis of sarcoma of chorioid and advised immediate removal The patient refused this. The eye was examined at intervals of six months, but no appreciable change was noticed.

At varying intervals of from one to four weeks, the patient has experienced an aching in the eye, ending with a sharp pain lasting but a few minutes. The last attack occurred two weeks before I saw her. August 28 the pain began again and continued with increasing severity for twenty-four hours, and had become agonizing when I first saw her.

Tension was then plus three, eye quite hard. The lens was cataractous and therefore no examination of fundus could be made. With these symptoms and history, immediate enucleation of eye was advised and agreed to. There was no rupture of the sclera, and no symptoms of metastasis and, up to the present time, nine months, there has been no local recurrence.

On section of the eye-ball the sarcomatous tumor-mass is plainly seen. It is about five-eighths inch in diameter and nearly spherical. It is of the leucomatous, or non-pigmented variety.

The points of interest in this case are the long quiescent first stage, the rapid onset and severity of the glaucomatous stage, and the fact that it occurred in the right eye of a woman and was non-pigmented, all of which being against the rule. Under the microscope, it proved to be a round-celled sarcoma.

CLINICAL REPORT

TYPHOID EPIDEMIC DUE TO INFECTION OF MILK.*

By Elmer E. Heg, M. D.
Seattle, Wash.

On December 2, 1910, Dr. B. E. Hoye, County Health Officer, reported to this office that about twenty-five cases of typhoid fever had been reported to him as having occurred at Enumclaw, beginning on November 22, up to that date.

Upon the first day of December he had visited Enumclaw and made a short but careful examination into conditions prevailing there, and was convinced that the cause of the spread of typhoid fever in this locality was due to the infection of milk at one dairy; he ordered the sale of milk from this dairy to be discontinued, and requested that the State Commissioner of Health make a further investigation to confirm him in his findings, if possible, and to supplement his order in any way needed.

On December 4 the State Commission visited Enumclaw, accompanied by Dr. Hoye, and found the following conditions to exist:

That from the date of the first case, November 22, up to December 4, thirty-two cases in all had occurred. That all of these cases had occurred in the employes, or the families of the employes, of one sawmill company, located between two and three miles from Enumclaw. Dr. J. J. Smith, who was the attending physician and employed by the sawmill company, had immediately removed each case as it occurred to the hospital in Tacoma, no case being allowed to remain either in the houses of the sawmill company or in Enumclaw longer than was necessary to establish a diagnosis—usually not longer than two or three days—thereby eliminating all possibility of contact as a cause of the spread of the disease. It was further found that the water supply to the different families infected was from three different sources. All were from springs located in such a manner that there was practically no probability of infection in any case.

It was further found that a colony of Japanese laborers at the mill, numbering between 30 and 40, were using the same source of water that was used by nearly one-half of the cases that were reported, and that no case of typhoid fever had occurred among the Japanese; also that cases of typhoid fever had occurred among the whites that used each of the three different supplies of water. It was apparent, therefore, that water could be eliminated as a source of infection.

About one-half of the cases got their meals at the mess house of the company, and the other half of the cases occurred in those living and eating in their own houses. Hence, there could be no infection of any common food supply excepting milk.

Upon investigation of the milk supply it was found that the mess house of the mill, all of the families of the employes, and a camp of railroad construction engineers, were supplied by two dairies, and that the Japanese did not use any milk whatsoever. In checking up the places supplied by the different dairies, it was found that the mess house received milk from both dairies and that the families all took milk from either one or the other of the two dairies, and that all of the cases that had occurred among the different families were supplied by one dairy, which also supplied the railroad construction engineers' camp.

An investigation of the dairy developed the fact that early in November the proprietor of the dairy had been taken sick and the attending physician had made a diagnosis of pneumonia. He was in bed for several days, apparently became better, and then got up, the attending physician having seen him two or three times. After having been up and about for a few days he was again taken sick, and when seen by the investigator was ill with a case clinically typical typhoid fever. During all the time of his illness he had been attended by his wife, who also attended to the milk and dairy utensils. That no disinfection of any excreta, and probably very little care as to the hands of the attendants, had been exercised up to the time of Dr. Hoye's first investigation, at which time the dairyman's wife and two daughters were also sick with a disease clinically typhoid, and all were being attended by a nurse who was using moderate precautions as to disinfection. Prior to the first of November no cases of typhoid fever had occurred in or around Enumclaw for about ten months. Only an indefinite history could be obtained from the dairyman, who was not apparently very intelligent, as to visitors at his house, or as to his absences from home, there evidently being an inclination to suppress information.

Dr. Hoye, on December 1, directed that no more milk should be sold by this dairy until arrangements were made for handling the milk by the people who did not come in contact in any way with the family of the dairyman, and the sale of this milk at the sawmill village was entirely discontinued.

Every family who bought milk from this dairyman, all of whom lived at the sawmill village, had one or more cases of typhoid fever, with the exception of one family, and they stated that for months they had used no milk except for cooking purposes. The engineer in charge of the railroad engineers' camp, upon learning that the milk from the dairy was suspected as a causative agent, asked his men who were in the habit of drinking milk, and found that three did so. Within a few days thereafter all three became sick with typhoid.

From the time the sale of milk was discontinued on December 1, cases continued to develop until December 13, when the last case occurred; there having been 41 cases in the lumber camp, 3 cases in the construction engineers' camp, and 4 cases at the dairy, making a total of 48 cases, with a mortality of 4, or a percentage of 8⅓ per cent.

The striking points about this epidemic are the following: The suddenness with which the epidemic occurred; the fact that it began within about three weeks after the first sickness occurred at the dairy; that the same person who waited upon the sick dairyman also attended to the milk and the cleansing of the dairy utensils; the large number of cases in proportion to the users of the milk; the fact that one or more cases occurred at every place where the milk was used, with one exception; also the fact that a relatively large colony of Japanese were living under practically the same general conditions, with the exception that they did not use milk, and that no cases occurred in this colony; that all cases ceased within two weeks after the discontinuance of the milk supply; and the total elimination of the possibility of contact by removal of all cases to a hospital in another town, make this as classical a case of milk epidemic as probably has been reported.

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*Reprinted from "Studies in Typhoid Fever," by the Washington State Board of Health during 1909-1910.

(Report of an epidemic of typhoid fever occurring at Enumclaw, King County, Wash., November 20 to December 13, 1910, due to infection of milk.)

NORTHWEST MEDICINE
The Journal of the State Medical Associations of Oregon, Washington, Idaho and Utah.
Devoted to the Interests of the Medical Profession of the Pacific Northwest.
Editorial Office, 719-22 Cobb Building, Seattle, Wash.
JULY, 1911.

EDITORIAL

ASSOCIATION MEETINGS.

British Columbia Medical Association, Vancouver, August 31-September 1.

Washington State Medical Association, Spokane, September 5-7.

Utah State Medical Association, Salt Lake City, October 4-5.

Idaho State Medical Association, Boise, October 11-13.

E. A. SOMMERS, M. D.,
Portland, Ore.,
President Oregon State Medical Association, 1911-1912.

THE OREGON ASSOCIATION MEETING AT PORTLAND.

The meeting of the Oregon Association, held at Portland last month, was different in some particulars from any meeting that has been held in the Northwest. The striking feature was due to the fact that the program consisted entirely of papers and addresses by Eastern men of note, nobody from Oregon or adjacent states participating except the President, Dr. Van Dyke, who delivered the customary President's address. This plan possessed the advantage of presenting to the audience new material of scientific value on some subjects with which most of the hearers were but slightly familiar. A feature uncommon in state association programs was the predominance of medical subjects, almost to the exclusion of surgical, only one paper on a surgical subject being presented, that of Dr. Tinker on exophthalmic goiter. A noticeable fact was the prominence taken by tuberculosis, nearly every address dealing with it to greater or less extent. The only disadvantage in such a program lies in the fact that discussion is almost prohibited, partly on account of unfamiliarity of the members with the subject matter and also a hesitancy to criticise papers presented by acknowledged authorities, which does not adhere to papers presented by our own members with whom we are more familiar.

While it was a source of regret that Drs. Murphy, Deaver and Billings were unable to attend, as had been expected, great pleasure and satisfaction attended the address by the distinguished man who appeared on the program. It was a pleasure to listen to the beautifully expressed thoughts of the great man of our profession, Dr. Wm. Welch, of Baltimore. All physicians who have come in close contact with him love him for his personal characteristics as well as his great knowledge, while those who have never had the pleasure of personal acquaintance admire him for his leadership in the profession as well as for the work he has accomplished in many lines for the benefit of suffering humanity. In his address on immunity in tuberculosis he presented many facts in a convincing and instructive manner, which will remain firmly fixed in the thoughts of his hearers. All regretted his short stay at the meeting, which permitted him to appear but once on the program.

Dr. M. P. Ravenel, of Madison, Wis., possesses such a power of correct information on the subject of tuberculosis, both human and bovine, that it seems as if one might well become familiar with the whole subject, could he but listen long enough to the words of this original investigator. Attention was called to the fact that, when Koch in 1901 denied that bovine tuberculosis should be considered at all as a factor in the human form of the disease, Ravenel was the only man to stand up before the representatives of the world and deny the statements of the discoverer of the tubercle bacillus. During the subsequent ten years investigators of the whole world have confirmed the opinion then held by Ravenel. He is a perfect whirlwind in the presentation of his subject, his thoughts being presented so voluminously and with such rapidity that one can scarcely grasp and digest all that he utters. While his words indicate to some extent the immense amount of work that has been done and is being accomplished in the investigation of tuberculosis, many of his hints suggest that there are undiscovered facts in this line, which are yet to be worked out and presented to the world. In his second address on bovine tuberculosis he showed how important it is for the health of the whole community that the disease be eradicated from cattle, which can be accomplished only by a general campaign against the disease. He stated that it was just as reasonable to insist upon dairymen selling milk free from tuberculous infection as it is to prohibit poisonous food, and to destroy decayed vegetables. If an address of this kind could be presented to farmers as well as to doctors there might be a hope of a speedy eradication of tuberculosis in cattle.

The address of Dr. C. F. Hoover, of the Western Reserve University, at Cleveland, on the disturbances of the vagus nerve, showing the effect on the heart and respiration, contained a fund of information mostly new to the hearers. He recited many interesting clinical cases of an obscure character which were explained on the basis of disturbance of the vagus, the consideration of which might well inspire one to a new line of study in many of these cases of disturbed cardiac and respiratory rhythm. His second address on spinal and cerebral syphilis was a most instructive presentation of the treatment of this disease in nervous cases. It was particularly interesting to note the stress he places on the fearless use of mercury when properly administered. Like many other thinking and observing men of the present time, he is not enthusiastic over the curative powers of salvarsan. He also stated that he does not place implicit confidence in the diagnostic value of the Wassermann test, since he cites unquestionable cases of syphilis of the cord where this test was negative. It was most interesting to listen to this man who has been described by some of the leaders of the profession as being the coming medical man of this country for the near future.

In the treatment of exophthalmic goiter, Dr. Tinker, of Cornell University, presented new hope for those desperate cases which seem beyond relief, in a description of what he terms the "stage operation." By this he means the removal of the goiter by a series of operations in which a little is done at each sitting under morphin and hyoscin, aided if need be by cocain. A patient is thereby saved from the great shock of a complete operation at one sitting. He finds very few cases so desperate that by this conservative treatment they cannot obtain relief with safety.

Dr. Hurty, of Indianapolis, was very pleasing in his talk on New Hygiene by showing, if one were to regulate his diet, mode of life and general attitude toward his daily experiences, he ought to live to a good old age with much fewer of the ills of human life than is experienced by the average man. All who met the doctor were delighted with such a genial representative of the Hoosier state.

Dr. Fulton, of Baltimore, supplemented the technical addresses of the program by giving an illustrated evening lecture to the public, describing how to prolong human life by the control of certain preventable diseases. This is a useful sort of address which the profession ought more frequently to present to laymen.

It is very much to be regretted that the numbers on the program were nearly all delivered without notes, in consequence of which it will be impracticable to offer them in print to our readers. It is unfortunate that a fund of so much valuable information cannot be considered at leisure on the part of the profession of the Northwest who were not privileged to attend this meeting. We hope at a future date to receive a few of the papers which will be duly published.

The Portland profession maintained its well established reputation of cordial hospitality. The attentions received from the physicians of this city, together with the unequaled climatic conditions during that week, led the Eastern visitors to declare unanimously that they had nowhere visited a city with the all around attractions that they found in Portland. The social features of the meeting reached a climax at the banquet of the second evening, which was the most largely attended function of this kind which has occurred at any of our association meetings. It was the first affair of this kind of the Oregon Association which has been attended by the lady physicians, which feature was looked upon as a successful innovation. The toasts of the evening were unusually entertaining and humorous, all the Eastern visitors being supplied with a most jolly load of anecdotes and personal reminiscences. Under the genial guidance of that unique toastmaster, Dr. House, there wasn't a dull moment from beginning to end. It was left to Dr. Harry Lane, however, under the suggestive toast of "Lamentations," to reel off the most side-splitting collection of fun which it had been the privilege of such a gathering to listen to for many a day. He proved once more that he is in a class by himself as an after-dinner entertainer. The attendance was one of the largest on record, chiefly from the Oregon physicians, with representatives from many Washington cities. C. A. S.

THE WASHINGTON ASSOCIATION AT SPOKANE NEXT MONTH.

The annual meeting of the Washington Association meets at Spokane, Sept. 5 to 7. The preliminary program is herewith published so far as it is completed at our date of publication. It is to be observed that the program is composed entirely of representatives of the profession from the Northwest. Past experience has shown that it is feasible to have an interesting and profitable meeting under such circumstances, and the papers herein mentioned indicate that such a gathering will be held next month.

The committee on entertainment is putting forth an effort to make this meeting especially attractive for the wives as well as for the members. It is recognized that, while many of the physicians have known each other for years, they are unacquainted with each other's wives who are as much entitled to a few days' recreation as the men of the family. Accordingly special entertainment has been provided for the ladies for this occasion. Visiting physicians are expected to keep this fact in mind and not come singly as they have usually done in the past. Headquarters and information bureau will be at Hotel Spokane. Hotel reservations can be made through Dr. Geo. Libby, Paulsen Building. A public meeting, with talks on health and sanitation, will be held at First Methodist Church on Thursday night.

PROGRAM.

TUESDAY, SEPT. 5, 9. A. M.

Meeting of House of Delegates.

Opening Session, 10:30 A. M.

Call to order by the president, Wilson Johnston, Spokane, Wash.

Invocation: The Very Reverend Wm. C. Hicks, Spokane, Wash.

Address of Welcome: J. W. Hindley, mayor of Spokane, Wash.

Response: Wm. F. Kirkpatrick, Bellingham, Wash.

Address of the President: Wilson Johnston, Spokane, Wash.

Afternoon Session, 2 P. M.

Dietetic Management of Febrile Diseases, especially Typhoid Fever: Herman P. Marshall, Spokane, Wash.

Antityphoid Inoculation: John E. Lane, North Yakima, Wash.

Abstract: Resume; applicability to use in private practice; experience in Yakima Valley.

Discussion opened by Major Dean, Surgeon U. S. Army, Fort George Wright.

Diabetes in Childhood: Walter Gellhorn, Seattle, Wash.

Abstract: Our present knowledge of diabetes; treatment of the disease and its complications with special regard to the oatmeal diet; report of cases; conclusions.

Discussion opened by J. D. Lenty, Spokane, Wash.

WEDNESDAY, SEPT. 6, 9:30 A. M.

Congenital Dislocations of the Hip: Fred J. Fassett, Seattle, Wash.

Discussion opened by Edward A. Rich, Portland, Ore.

Foreign Bodies in the Knee Joint: Charles F. Eikenbary, Spokane, Wash.

Treatment of Fractures by the Open Method: Walter C. Woodward, Seattle, Wash.

Discussion opened by Dr. Ernest A. Sommers, Portland, Ore.; John O'Shea, Spokane, Wash.

Afternoon Session, 2 P. M.

A New Method for Gradual Automatic Occlusion of the Larger Arteries at One Operation: James M. Neff, Spokane, Wash.

Discussion opened by J. B. Eagleson, Seattle, Wash.

· **Treatment of the Menopause Uterus:** T. C. Witherspoon, Butte, Mont.

Discussion opened by Ernest Tucker, Portland, Ore.; C. N. Suttner, Walla Walla, Wash.

Paper by K. A. J. MacKenzie, Portland, Ore.

THURSDAY, SEPT. 7, 9:30 A. M.

Cholecystectomy, an Experimental Study: J. Earl Else, Pullman, Wash.

Abstract: Review of the literature; report of experimental work; summary, conclusions.

Discussion opened by R. C. Coffey, Portland, Ore.

Treatment of Syphilis of the Central Nervous System: Walter C. Williamson, Portland, Ore.

Discussion opened by John M. Semple, Supt. Medical Lake, Wash.

Nine Months' Experience with 606 as Controlled by the Wassermann in eight cases: G. Sherman Peterkin, Seattle, Wash.

Abstract: The value of the Wassermann reaction in syphilis; efficiency of 606 when used alone in curing syphilis; frequency of dosage, size; indications for repeating same; advisability of combining treatment with potassium iodide, mercury, etc.

Discussion opened by Ray Matson, Portland, Ore.; G. J. Fleming, Spokane, Wash.

Thursday, 2 P. M.

Business session.

Election of officers.

ENTERTAINMENT.

Tuesday, 12 o'clock, Sept. 5. the visiting physicians will be the guests of the Chamber of Commerce at a luncheon in the dining room, Hutton Building.

Tuesday at 7 P. M. The Spokane County Medical Society will entertain the State Medical Association at an informal dinner in the Hall of the Doges, Davenport's.

Tuesday evening, the wives of the members of the association will be entertained by Dr. and Mrs. Wilbur W. MacKenzie at a lawn party at their residence, 1028 Tenth Avenue.

Wednesday evening, Sept. 6. Dr. and Mrs. Wilson Johnston will give a reception to the members of the State Medical Association and ladies at the Hall of the Doges, from 8:30 to 9:30 P. M. Dancing from 9:30 to 11 P. M.

Wednesday afternoon, the ladies will be entertained at a tea at the residence of Dr. and Mrs. A. A. Mathews, 2323 Third Avenue.

Thursday morning, Sept. 7, an auto ride is planned around town and out to the Country Club W. J.

SPECIAL RATES TO SPOKANE.

A railroad rate of one fare and a third will be made on all roads into Spokane for the State Association meeting next month. The conditions are that the purchaser of a ticket must pay one full fare to Spokane and receive a receipt for the same from his local agent. On presenting this ticket to the secretary of the meeting for his endorsement, the holder will be entitled to a one-third return fare, provided 50 such tickets are presented to the secretary. Let all who attend this meeting, outside of Spokane, keep this notice in mind. The reduction will be of no value for any one unless fifty tickets are purchased. Hence, it will be essential that those living near Spokane purchase one full fare and obtain receipts with their tickets, in order to grant the benefit of the reduction to those coming from a distance.

If a sufficient number of tickets are sold the Great Northern and Northern Pacific Railroads will run special medical trains from Western Washington, leaving on the evening of Sept. 4. If the number shall prove insufficient for this, they will provide special medical sleepers which will run attached to the overland trains. By this means members and their wives from the Northern and Southern cities of the Sound can be well cared for on this trip. The best equipments and all accommodations for comfortable travel will be provided, including special caretakers for the journey. Therefore, visitors from west of the mountains should keep these accommodations in mind and not fail to secure reservations on the special medical train. It is anticipated that a large attendance will come from Western Washington to help make this one of the best meetings of the State Association.

THE A. M. A. MEETING AT LOS ANGELES.

The sixty-second annual session of the American Medical Association met in Los Angeles June 27-30, and was attended by about 2,100 physicians from the various parts of the country. California medical men turned out en masse and composed nearly half the number present, the actual number from that state being 997. It is to be regretted the physicians of Washington did not respond in greater numbers, there being only about twenty present from this state, one of that number being prepared with a paper for the meeting. The sections were well attended and the program well filled, both in number of articles and the interest shown therein, with the single exception of dermatology, which failed to materialize. The local physicians were most attentive and courteous to the visitors, providing banquets, garden parties, receptions, concerts and roof garden parties, interspersed with prize fights for the amusement of the medical men and their friends, with the result that during the entire week there was "something doing" from 8 a. m. to 1 a. m. Side trips were also well arranged without cost to the visitors, several of which were most beautiful and instructive, among which to be mentioned especially was that to Catalina Isle (the Magic Isle of the Pacific), where, after a special fish-bake dinner, the visitors were taken aboard glass bottom boats and shown the wonders of the deep, such as the submarine gardens, fish and plant life at the bottom of the ocean. The weather was quite warm, but all seemed to enjoy themselves until the rush came for home, when the trains were uncomfortably filled. It is to be hoped that in the near future King County Medical Society will extend an invitation to the A. M. A. for its annual meeting to be held in Seattle, when there is little doubt it will be accepted, as the weather in June is exactly suited for such an assembly. From interviews with various men of prominence from the East while in Los Angeles, it seems certain that the invitation to assemble here would meet with a general approval. R. P. S.

A TRI-STATE MEETING FOR 1912.

The combined meeting of the associations of Oregon, Washington and Idaho, which was held in Seattle two years ago, seemed to meet with especial favor on the part of the members of all the associations. It has been a subject of frequent comment since then that it would be very desirable to establish such a tri-state meeting, to be held at stated intervals. This opinion has been put into substantial form by the Oregon Association at its meeting last month, when its house of delegates passed a resolution favoring such a meeting in Portland for the summer of 1912. The officers of that state plan to present an invitation to this effect before the associations of Washington and Idaho at their annual meetings in the next few months. It will then be determined whether the desire for such a meeting has a substantial foundation, as indicated by the acceptance of the invitation by the other associations. In our opinion, it seems that a union meeting of this nature is desirable in many ways. A sufficient number of papers would probably be offered which would necessitate meeting in sections, thus permitting the covering of more subjects in a more thorough manner than is possible in the usual one section meeting. It is to be hoped that the associations of Washington and Idaho will join that of Oregon and prepare for a large, successful meeting next summer. C. A. S.

THE VISIT OF DR. JOHN B. MURPHY.

All who attended the Portland meeting last month regretted that Dr. Murphy was unable to be present as announced. This loss was compensated for, however, by his subsequent visit to Portland and Seattle, in both of which cities, before large audiences, he repeated his address on Diseases of the Bones and Joints which had been presented at the Los Angeles meeting. By this means probably more physicians heard him than would have been the case if he had spoken only at the Oregon Association meeting. It was the general opinion of all who heard him that this was undoubtedly the most instructive address that has been heard in the Pacific Northwest. Dr. Murphy is pre-eminently the teacher of this day, and with a few words, he describes in the clearest manner the essential features of any subject which he presents. The practical points which he offered concerning fractures and the various diseases of the joints will add a great deal to the working knowledge of all the physicians who heard him on this occasion. The physicians of Oregon and Western Washington feel deeply indebted to him for the favor of this visit. C. A. S.

MEDICAL NOTES

OREGON.

Dr. A. E. Rockey, whose name is familiar in connection with the Rockey incision for appendicitis, was himself operated on for this disease on June 16.

Address to Women. Dr. Rosalie S. Morton, of New York, chairman of Public Health Education Committee of the A. M. A., addressed a large audience of women in Portland, on July 11. Dr. Morton talked on the work of the committee and upon the part taken by physicians in the education of the public in this direction.

Physician on Charter Committee. Dr. A. C. Smith, of Portland, has been appointed by Mayor Simon as a member of the charter committee. The commission is engaged in working out the proposed commission plan of government.

Dr. and Mrs. F. G. Swedenburg, of Ashland, have returned from California, where they had a rather thrilling experience in a San Francisco earthquake.

Gasoline was largely the theme of a semi-humorous and highly interesting meeting of the Pendleton City and County Medical Society, held at the residence of Dr. C. J. Smith last month. Addresses were made by the following: Dr. J. D. McFaul, Dr. L. K. Blakeslee, Dr. E. R. Ringo, Dr. E. O. Parker, Dr. I. U. Temple and Dr. T. M. Henderson.

WASHINGTON.

The July Meeting of the State Examining Board.—The summer session of the Washington examining board was held at Tacoma, July 4 to 6. At this time 85 applicants appeared for examination, being the smallest number for several years, of whom 3 did not complete the examination. Of these 53 were granted licenses. This shows 40 per cent. of failures, probably the largest number of unsuccessful applicants that has appeared before this state board. There were five women candidates, of whom three were successful; also five osteopaths were examined, of whom one was granted license to practice osteopathy.

According to a recent rule of the attorney-general, all applicants hereafter must write the examination in English without the aid of an interpreter. In accordance with this rule, a Japanese woman physician was unable to take the examination. She stated, however, that she should perfect herself in English and appear again. A new feature of the examining board was a bedside examination in physical diagnosis at the county hospital. Applicants also are now examined in miscroscopic sections in pathology, bacteriology and histology. The average age of this class was older than ordinary, the applicants averaging from five to ten years in practice. Newly elected officers for the board are: President, E. J. Taggart, M. D., of Bremerton; Vice-President, H. R. Keylor, M. D., of Walla Walla; Secretary, F. P. Witter, M. D., of Spokane; Treasurer, W. T. Thomas, D. O., Tacoma. The next examination will be held in Spokane in January.

The following is a list of the successful applicants:

Bash, Clementine, Seattle
Bell, Herbert Y., Tacoma.
Blair, Faris M., Seattle.
Brandt, Geo. M., Auburn.
Buckley John, Seattle.
Burnett, J. M., Armstrong, B. C.
Cleaves, Harry F., Seattle.
Cornett, Geo. W., North Yakima.
Dailey, Michael A., Everett.
Day, Wm. W., Dayton.
DeWitt, C. H., Tacoma.
DeWitt, jr., C. H., Tacoma.
Drury, J. E., Wenatchee.
Earles, Wm. W., Seattle.
Faucett, S. T., Clyde Park, Montana.
Gieschen, Albert H., Fallbridge.
Holmes, Will H., Tacoma.
Jacquot, G. L., Ivanhoe, Minn.
Jeney, W. C., Vheaville, Cal.
Kinzey, Logan C., Bellingham.
Kinne, Geo. C., Portland, Ore.
Lapidewski, Constantine, Tacoma.
MacCallum, Chas., Portland, Ore.
McClure, Wm L., Puyallup.
McKeown, Ady Ray, Leavenworth.
Mekkelsen, P. C., Ephrata.
Monk, F. H., Ft. Simcoe.
Monroe, Duncan D., Seattle.
Morse, Park A., D. O., Michigan City, Ind.
Osborn, Harold D., Bickelton.
Patton, Wm. T., Spokane.
Phy, Wm. T., Spokane.
Purdy, J. Spencer, Sultan.
Quigley, Raymond A., Everett.
Seibert, Alex W., Wenatchee.
Seibert, Minnie S., Wenatchee.
Shafer, H. S., Seattle.
Slaughter, V., Tacoma.
Southward, A. E., Seattle.
Steele, Chas. M., Reno, Nev.
Stetson, John B., Seattle.
St. Sure, Frank, Ellensburg.
Synge, Ella, Tacoma.
Tamblyn, E. J., Tacoma.
Tiffin, Ed. R., Spangle.
Thueringer, Jos. M., Tacoma.
Van Pelt, R. S., Malden.
Vanderboget, C. L., Seattle.
Warren, Franklin L., Seattle.
Wightman, Robt., Victoria, B. C.
Wilcox, C. C., Vancouver.
Wilson, Clarence E., Brogan, Ore.

Treatment of Leprosy. Dr. J. T. Wayson, son of Mr. and Mrs. Jas. Wayson, of Port Townsend, has been working for several years upon the treatment of leprosy. During his recent visit to his parents he stated that he feels that he has arrived at a method by which this disease can be cured if taken in its early stages. He has treated several cases at the receiving station in Honolulu with apparently good results. The treatment consists of general tonic treatment internally and the local application of carbon dioxide snow.

The Children's Orthopedic Hospital, at Seattle, realized $300 from a strawberry festival, June 24, at the residence of Mrs. Gertrude Brawley.

Typhoid at Yakima. Dr. L. L. Lumsden, typhoid and sanitary expert of the Public Health and Marine Hospital

Service, is investigating conditions in the Yakima Valley with a view to eradicating the typhoid which for several years has seemed to be endemic there. The city and county health officers and other officials are working hand in hand with Dr. Lumsden and excellent results may be expected.

The Yakima Health Officer. The Yakima County Commissioners have signed a contract with Dr. Thos. Tetreau as county health officer for two years. This is in accordance with a suggestion made by Dr. Lumsden that the county and city work shall be under the supervision of one man. The salary of the combined positions is to be between $4,000 and $5,000, which will enable Dr. Tetreau to devote his entire time to the work.

The Puyallup Hospital was formally opened June 22. The old Meeker mansion has been remodeled and the equipment is as complete and up-to-date as could be secured.

Tuberculous Hospital. Tuberculous patients at the Walla Walla County Hospital are to be segregated from the other inmates. The County Commissioners have awarded a contract for the construction of a three-room house to be used for this purpose.

Dr. J. W. Goodhardt, of Bellingham, has returned from the meeting of the Oregon State Medical Society, in Portland, having made a 325-mile trip in his automobile.

Dr. A. L. MacLennan, who has recently finished his hospital experience in the East, has taken the position of house physician in the Northwestern General Hospital at Irondale.

IDAHO.

Mayor of Lewiston. Dr. L. J. Perkins has been elected mayor of Lewiston. Dr. Perkins has resided in Lewiston eight years, during which time he has served as county physician and also as a member of the board of education.

OBITUARY.

Dr. T. N. Berlin died at Kent, Wash., June 16, at the age of 88 years. He was born in Pittsburg, Pa., whence he moved to Minneapolis. He practised there for twenty years and then lived a year in Seattle before moving to Kent.

Mrs. Dr. E. B. Flagg died at Vancouver, Wash., June 3, from injuries to the head received by being thrown from a buggy. Her husband, Dr. C. E. B. Flagg, was injured at the same time. Mrs. Flagg was born in Indiana 47 years ago. She taught school for a number of years and had practised medicine for sixteen years.

Dr. James A. Richardson died at Woodstock, Ore., June 4, at the age of 70 years. He was born in Illinois and crossed the plains to the Willamette Valley in 1851. At the age of 25 he graduated from Cooper Medical College. For several years he practised at McMinnville, later moving to The Dalles. For the past 35 years he practised in Salem. He was active in politics, serving in the legislature and as mayor of Salem. For a time he was physician to the insane asylum.

Dr. Emil Puhl died at Fairbanks, Alaska, May 16, after an illness of three weeks, from diseases of the brain and heart. He practised for some years in Portland and in the fall of 1906 went to Fairbanks. He had many friends in Alaska, being widely known on account of his kindly disposition and success as a physician.

Dr. J. E. Jewell, of Portland, Ore., died suddenly on the street, May 24. He was a well known physician of that city.

REPORTS OF SOCIETY MEETINGS

THE THIRTY-SEVENTH ANNUAL MEETING OF THE OREGON STATE MEDICAL ASSOCIATION, HELD AT PORTLAND, ORE., JULY 10-12, 1911.

The annual meeting of the Oregon State Medical Society was called to order in the Convention Hall of the Commercial Club of Portland on July 10 at 11:00 a. m., President F. W. Van Dyke in the chair.

The address of welcome was delivered by Hon. W. W. Cotton, acting for the Governor, who paid a high tribute to the Governor for his humane policy of handling the state institutions. He lauded the work of the practising physician and called attention to the necessity of state wide laws controlling the dairy interests.

Dr. F. W. Van Dyke then delivered the President's address on Education and Training of Children. He deplored the laxity of the present day and called attention to the numerous and undesirable amusements that are now being placed in easy reach of children. His paper was discussed by Drs. W. T. Williamson, K. A. J. Mackenzie and Henderson.

At 2 p. m., Dr. William Welch, of Johns Hopkins Hospital Medical School, delivered an address—Immunity in Tuberculosis. He called attention to the enormous number of people, 94 per cent., showing lesions at autopsy and proved conclusively that early infection acts as immunizer in later life. He agreed with the public statistics of the present time that 15 or 20 per cent. of all children having glandular or cerebral tuberculosis get it through bovine origin. He said that the transformation of one species to the other or the morphology of the bacilli themselves was now the most interesting study in pathology. This paper was discussed by Drs. J. F. Griggs, of Tacoma, C. A. Smith, of Seattle, and K. A. J. Mackenzie, of Portland.

Dr. Welch said in closing that the mortality rate from tuberculosis was decreasing and that the tuberculine used for diagnosing was harmless except for the peptones and glycerine.

At 3 p. m., Dr. C. F. Hoover, of the Western Reserve University of Cleveland, gave a very scholarly address—The Clinical Study of Disturbances in the Peripheral Innervation of the Heart and Respiration.

At 4 p. m., Dr. J. T. Wayson, of Hawaii, gave an interesting address illustrated with 100 stereopticon views, showing the lesions of leprosy in the Hawaiian Islands. The lecture was one of unusual interest, practically every lesion being shown either by photographs or by wax casts. He told of the possibility of healing early cases by the use of carbon dioxide snow and, where the initial lesion was on the finger or foot, by amputation.

Tuesday, July 11.

At 10 a. m., Dr. Martin Tinker, Professor of Surgery at Cornell University, delivered an address—Surgical Treatment of Exophthalmic Goiter. He called attention to the frequency of goiter in the insane and advised slow and partial removal. He also called attention to the frequency of goiter in young girls at puberty and strongly advised against their being treated in any manner whatever.

At 11 a. m., Dr. M. P. Ravenel, Director of the Hygienic Laboratory of Madison, Wisconsin, gave an address—Relation of Human and Bovine Tuberculosis. He stated in opening that 30 per cent. of tuberculosis in children was of bovine origin. Its presence in 68 per cent. of the babies in New York and 58 per cent. in Germany absolutely disproved Koch's theory of the nontransmissibility of bovine tuberculosis to the human race; he stated that intestinal tuberculosis was a secondary condition and that the most natural infection would be in the lungs, where it was carried through the blood stream and filtered into the capillaries. How else could tuberculosis of the knee joint or meninges have occurred. The direct infections are always in the lungs. Tonsils are frequently the original source of infection. Chickens have frequently been proven to have been primarily infected from sputum and they in turn infect others in the same flock. He cited an instance where fish had been infected from the rinsing of tubercular cuspidors in the pool. He deplored the senseless agitation against the tuberculine sent out by the Bureau of Animal Industry and assured us that it was free from pathogenic organisms.

At 2:30 p. m., Dr. Hoover delivered a lecture—Clinical Study of Lumbar Puncture as a Means of Diagnosing Spinal and Cerebral Diseases. He opened by saying tabes dorsalis was always syphilitic. He called attention to the inaccuracy of the Wassermann test and showed that examination of the spinal fluid in any inflammatory condition would always show an increasing number of cells under each field. He cited numerous instances in which Wassermann examinations had been negative, where syphilis was proven by the examination of spinal fluid.

At 3:30 p. m., Dr. Hurty, State Health Officer of Indiana, gave an address on New Hygiene, dealing especially with the diet, calling attention to the excessive use of alcohol lowering the resistance and necessity of properly prepared food stuff taken slowly and better cooked. He called attention to the urgent necessity of complete vital statistics; the necessity of local and conclusive arguments to combat the senseless anti-vaccinationists. His paper was discussed by Capt. Reasoner, of Vancouver Barracks, Drs. Andrew C. Smith and Banks. Dr. Hurty in closing cited the army's predicament in the war with Spain and the necessity of laws being made giving the proper authority as well as the necessity for education.

At 4 p. m., Dr. W. J. Butler read a paper—The Diagnosis of Syphilis, Cancer and Tuberculosis by Examination of the Blood. His paper was discussed by Capt. Reasoner and Dr. Ray Matson.

Wednesday, July 12.

At 10:30 a. m., Dr. Fulton gave an address on the proposed meeting of the International Congress of Hygiene and Demography, to be held in Washington next year and urged all physicians to co-operate in the community in which they live for representation and exhibits from Oregon.

At 11 a. m., Dr. Ravenel delivered a second address on the Control of Bovine Tuberculosis. He unqualifiedly upheld the accuracy of the tuberculine test and said in his own statistics of 400 cases it has proven correct in 98 2-5 per cent., which, he said, was a much better percentage of accurate diagnosis than could be obtained in any disease in the world. He lamented the inaccurate findings of the Shurtleff Commission in Illinois and said that a great deal of it was not only untrue but that the testimony was garbled so that it was of little or no value. He advised the purchase of cattle only on the tuberculine test and wherever cattle were bought they should be kept in quarantine at least three months before turning in with the rest of the herd. Calling attention to the economic standpoint and laying aside all question of public health, he said that it would be a saving to farmers and consumers alone if tuberculosis could be eradicated.

On Wednesday evening Dr. Fulton gave an illustrated lecture on Infant Mortality, illustrated with charts showing the various diseases that tend to shorten the length of human life and gave splendid advice for the correcting of these conditions.

MEETING OF THE HOUSE OF DELEGATES OF THE OREGON STATE MEDICAL ASSOCIATION.

The meeting was called to order by the President, Dr. F. W. Van Dyke and Dr. Calvin S. White, Secretary.

The Committee to visit with the Bar Association reported the result of three conferences and bill introduced and defeated in the last session of the Legislature.

The Committee on Legislation had no report to make.

The delegate to the A. M. A., Dr. C. J. Smith, submitted a report which is hereto appended.

The delegate to the meeting of the A. M. A. next year was instructed to vote that a membership in County and State societies must be held necessary for a membership in the A. M. A.

Dr. William House moved that the next session of the State Medical Association be made a tri-state session and that Washington and Idaho be invited here. Considerable discussion followed,—the motion being opposed by the President, the Secretary and Dr. Tilzer and being favored by Drs. Williamson and House. On motion, it was carried.

The delegates then resolved themselves into a committee on nominations. For President, Dr. E. A. Sommers, Dr. E. E. Ringo and Dr. F. E. Smith were nominated; for First Vice-President, Dr. L. C. Griffith, Dr. A. C. Seeley; for Second Vice-President, Dr. N. E. Winnard, Dr. Johnson, of Corvallis; for Third Vice-President, Dr. Keen, of Silverton, and Dr. Dix, of Marshfield.

The following resolution was introduced and on motion carried:

"That the State Medical Association create a Public Health Education Committee to co-operate with the A. M. A. committee for Public Health Education

"And that the State Chairman of the A. M. A. committee be a member of the State Public Health Education Committee."

At the business session following, Dr. E. A. Sommers was elected President, Dr. A. C. Seeley First Vice-President, Dr. Winnard Second Vice-President, Dr. Keene Third Vice-President, Dr. M. B. Marcellus Secretary and Dr. Katherine Manion Treasurer.

Dr. A. W. Baird and Dr. A. C. Smith were elected Councilors for the ensuing year.

Dr. K. A. J. Mackenzie was elected delegate to the A. M. A. and Dr. W. T. Williamson alternate.

Dr. K. A. J. Mackenzie and Dr. W. T. Williamson were appointed Trustees for Northwest Medicine by acclamation.

The reports of the Secretary and Treasurer were read and on motion adopted.

PORTLAND CITY AND COUNTY MEDICAL SOCIETY.

Pres., William House, M. D.; Secty., G. S. Whiteside, M. D.

The June vacation meeting of the Portland City and County Medical Society was held on June 14 in the society rooms. Dr. Otis B. Wight was chairman and Dr. G. Norman Pease was secretary of the meeting. About 25 members were present.

A paper was read by Dr. George F. Wilson on Fractures of the Lower End of the Tibia and Fibula, in which he discussed the various fractures, laying special emphasis on Pott's fractures. He outlined diagnosis and method of treatment, and gave his preference to the use of a posterior splint extending from just below the knee to about three inches beyond the toes, fitted on accurately and holding the foot in position until the plaster had set. He completed his dressing by a light circular plaster bandage. The splint was to be left on for about five weeks and then gradual return to the use of the limb. Discussion on this paper was opened by Dr. E. F. Tucker, who made a suggestion that these fractures be treated by a posterior plaster splint and an external splint of plaster wrapped around the ball of the foot, this to be held in position by a flannel bandage. Further discussion was made by Drs. Mackenzie, Baird, Panton, Pease and Labbe. Among other things was brought out the value of the X-ray in proving reduction of fractures.

The other paper was to have been read by Dr. R. H. Ellis, on Birth Fractures, but, as he was unavoidably detained, some general discussion on this subject was brought out by Drs. Labbe, Johnson, Start and Panton.

BOOK REVIEWS

Edited by Kenelm Winslow, M. D.

A Text-Book of Medical Diagnosis. By James M. Anders, M. D., Professor in the Medical Faculty of Paris; Physiand of Clinical Medicine, and L. Napoleon Boston, M. D., Adjunct Professor of Medicine, Medico-Chirurgical College, Philadelphia. Octavo of 1195 pages, with 443 illustrations, 17 in colors. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, $6.00 net; half morocco, $7.50 net.

This book will meet with general approval by practitioners of medicine throughout the English speaking countries. It fills a place on the shelf that has long been vacant in providing a source of diagnostic information midway between such small books, as Klemperer or Müller and Seifert, and the larger ones, such as Leube, Sahli and still larger Osler. As a handy volume for quick reference it is certain to find favor. The latest laboratory diagnostic aids in each disease are outlined. Almost every disease of the respiratory, circulatory, digestive, urinary and nervous systems is considered, as well as those of parasitic origin and the acute infectious diseases. The X-ray photographs, particularly those indicating abnormal stomach conditions, constitute a valuable asset of the book.

von Phul.

Medicolegal Aspects of Moral Offenses. By L. Thoinot, M. D., Professor of the Theory and Practice of Medicine cian to Laennec Hospital, etc., etc. Translated from the original French and enlarged by Arthur W. Weysse, A. M., M. D., Professor in Boston University, etc. Illustrated with 17 engravings, including 4 charts and diagrams. Cloth, 487 Pp. F. A. Davis Co., Philadelphia,

This is a volume that will interest chiefly the criminal lawyer and medicolegal expert. It is written by a Frenchman, therefore is a foreign view of continental conditions where complex social conditions have existed for years. The text discusses very fully, rape, indecent assaults, false assaults (rape blackmail), public offenses against decency (bestiality and exhibition of the genital organs), inversion and perversion of the sexual instinct, fetichism and other morbid sexual habits. There is little new in the text, Moll, Havelock Ellis and Kraft-Ebing being drawn on freely for cases. The chief topic analysed is rape and its definition in different states and countries. There is one adult to eight children raped. It is most common in large industrial centers. The average age of the children is 7 to 12 years old; adults 16 to 20 years; while the criminals are of all ages, but especially 30 to 40, though many are over 60. Considerable space is given to the hymen. Was there ever one? Can virginity be determined by such an irregular anatomic tissue, when we can have pregnancy with an intact, unruptured hymen? Rape can only be determined after all the evidence is weighed like any other case at law, unless the violation is so plain that any layman could make a diagnosis. Rape can be practised on a child, adult virgin or on a woman already deflowered. It can take place during natural sleep, during the sleep of anesthesia, on a comatose subject, during hypnosis and on idiots and imbeciles. The most important and interesting phase legally is the so-called rape during the cateleptic or mesmerized state, a number of cases of which are cited.

Peacock.

Progressive Medicine, Vol. 1, March, 1911. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, 355 pages, with 18 engravings. Per annum, in four paper-bound volumes, containing over 1,200 pages, $6.00 net; in cloth, $9.00 net. Lea & Febiger, Publishers, Philadelphia and New York.

In this volume may be found surgery of the neck, head and thorax, by Frazier; infectious diseases, by Ruhräh; diseases of children, by Crandall; rhinology and laryngology, by Kyle; and otology, by Duel. Frazier gives us the diverse opinion of authorities on the treatment of tuberculous glands. He quotes from Judd, who believes in operation in adults, and has done almost a thousand cases. If we resort to surgery no more beautiful operation could be imagined by one who has seen Judd's work. The tuberculin treatment has now many advocates, as Philip, quoted by Frazier. The reviewer noted recently that Murphy has used no other treatment for many years except to drain suppurating glands. Exophthalmic goitre receives much attention and the early symptoms, which should enable us to make a diagnosis without either exophthalmos or goitre, are described. This is an important matter in the treatment of hyperthyroidism. The pro's and con's in the matter of injections of alcohol in facial neuralgia are thoroughly discussed. The present status of intratracheal insufflation receives the attention it demands. Ruhräh supplies us with an instructive review of progress in the infectious disorders. The extraordinary success attending the injection of human serum in hemorrhagic disease of the new-born and the precise and simple method for obtaining this serum is chronicled by Crandall. As our readers are familiar with this valuable publication and our opinion of it so frequently expressed we can only say that this number fulfills all our expectations.

Winslow.

Practical Cystoscopy and the Diagnosis of Surgical Diseases of the Kidneys and Urinary Bladder. By Paul M. Pilcher, M. D., Consulting Surgeon to the Eastern Long Island Hospital. Octavo of 398 pages, with 233 illustrations, 29 in colors. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, $5.50

This is a volume that it is a pleasure to review, for there is little to criticize and much to praise. In the first place, the author knows the subject himself and has the literary ability to make his text plain yet complete. It is by far the best work on cystoscopy yet brought out. The author takes up indications for the use of the cystoscope, complete descriptions of European and American cystoscopes, direct and indirect cystoscopes, ureteral catheterizing cystoscopes, operating cystoscopes; the care of these instruments, preparations for a cystoscopic examination, instruments, room and accessories; the conducting of a cystoscopic examination, normal and abnormal appearance of the bladder wall and ureteral openings. Kelley's endoscope and its technic are described. The pathologic lesions considered are changes in the mucosa of the bladder, the muscular walls, the ureteral openings, cystitis, tuberculosis of the bladder, ulcer of the bladder, tumors of the bladder, stone in the bladder, hypertrophy and diseases of the prostate, and disease of the ureter. There is a very good chapter on testing the functional activity of the kidneys. The surgical renal diseases are discussed in turn, hydronephrosis, acute catarrhal pyelitis, suppurative diseases, renal tuberculosis, renal calculi, hemorrhagic diseases of the kidneys and cysts. The book closes with a chapter on the therapeutic uses of the cystoscope. All together the book is very readable and the illustrations by Eleanor Fry are accurate and beautifully done. The author is to be congratulated. Peacock.

International Clinics. Vol. II. Twenty-first Series. 1911. Cloth, 297 pp. J. B. Lippincott Co., Phila. and London. $2.00.

The contributions to this volume are classified under medicine, surgery, obstetrics and gynecology, neurology, laryngology, ophthalmology, pathology and postgraduate course. The book almost begins with a soothing account of the joys of cultivating medicinal plants as a means of recreation for the physician and ends with a monograph on wounds from a coroner's viewpoint, containing the most frightful and grewsome photographs of the various brutal hackings of the human which are inhumanly possible—the last of a decapitated body and its several mangled members. Between these two extremes there are many articles of normal interest and value, however. The first on constipation, by Turton, emphasizes the value of skiagraphs following a bismuth oxychloride meal in order to locate the seat of obstruction or delay. An unusually thorough and analytic article by Turck, of Chicago, on diseases produced by B. coli communis in the intestines is worthy our closest attention and thought. The wide scope and tremendous consequences following this infection are not sufficiently realized. The orthopedists are looking to it as the chief source of the commoner forms of arthritis, although this is not touched upon in this article. Some new modes of combatting this infection, as by the use of thyroid extract, are commended. Winslow.

Golden Rules of Diagnosis and Treatment of Diseases. By Henry A. Cables, B. S., M. D. Prof. of Medicine and Clinical Medicine of the College of Physicians and Surgeons, St. Louis, etc., etc. Cloth. 298 Pp. C. V. Mosby Co., St. Louis. 1911.

While this work is not at all complete it does not pretend to be. The writer presents the salient points in diagnosis, the kind of points one has learned by bitter experience and not from books. For instance, under gastric cancer one finds "Nodular swellings found under the skin about the navel or between it and the costal arch are metastatic growths." The truth of this has been shown by operation on such growths as primary lesions, only to have the real and fearful mistake come with a crushing blow to the operator later. The constant repetition of the word **remember**, affixed to each paragraph, becomes rather tiresome and loses psychologic force. The method of indexing could be improved, as much time is sometimes required to find the matter desired in the text. In places the Latin is questionable, but this may be due to faulty proof-reading. We can excuse all these paltry shortcomings for the amount of real, vital truths which the book contains and which are either not found at all or not properly emphasized in the text-books. Crutcher.

Modern Diagnosis and Treatment of Diseases of Children. A Treatise on the Medical and Surgical Diseases of Infancy and Childhood for Practitioners and Students. By Herman B. Sheffield, M. D. Instructor in Diseases of Children at the New York Post Graduate Medical School and Hospital, etc. 151 original half-tone photo-engravings and numerous smaller illustrations, some in colors. Cloth, 619 Pp. F. A. Davis Co., Philadelphia, 1911.

This book is intended to be a clinical treatise of medical and surgical dieases of infancy and childhood, and to embody the theory of pediatrics so as to meet the needs of the medical student and general practitioner. The arrangement is convenient, the type is large, and the marginal headings make the material easily accessible. The illustrations are numerous and well selected. The sphere of usfulness of this book, however, is not as clearly cut as many. It is big for the essentials of pediatrics, and yet is too brief to be of as much service as our best text-books. Manning.

Hospital Management. A Hand-Book for Hospital Trustees, Superintendents, Training School Principals, Physicians, and all who are actively engaged in promoting hospital work. By Charlotte A. Aikens, Author of "Hospital Training-School Methods and the Head Nurse"; "Primary Studies for Nurses"; "Clinical Studies for Nurses." 12mo of 488 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, $3.00 net.

Great care is manifest in the preparation of the contents of this book; and its few faults are chiefly mechanical. It betokens a writer with maternal affection for the work she essays, and this latest offspring of her pen is of promise, having the hall-mark approval and baptismal fingerprints of several eminent members of the American Hospital Association who contributed to its "borning." The book is commended to all interested in hospital affairs. Crutcher.

The Care of the Baby. By J. P. Crozer Griffith, M. D., Clinical Professor of Diseases of Children in the University of Pennsylvania. Fifth Revised Edition. 12mo. of 455 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, 1.50 net.

This book now appears in its fifth edition and is very satisfactory. It differs but slightly from the fourth edition, excepting that it has been carefully rewritten in many places and brought up to date. It gives pleasure to recommend it, especially to mothers for whom it was intended. Manning.

Interstate Association of Medical Examiners. At the recent meeting of the A. A. M. E. in Los Angeles, there was probably nothing accomplished that is of more interest to the doctors throughout the Northwest than the affiliation made between the Interstate Association of Medical Examiners and the American Association of Medical Examiners. In the future this section, including Washington, Oregon, Idaho, Montana, British Columbia and California, will be known as the Northwest Section of the American Association of Medical Examiners. To be eligible to membership a physician must be a regular examiner for some Life, Accident, Health or Liability Insurance Co. The next regular meeting of the society will be held in Spokane at the same time as the Washington State Medical Meeting.

NORTHWEST MEDICINE

The Journal of the State Medical Associations of Oregon, Washington, Idaho and Utah

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Entered March 14, 1903, at Post Office, Seattle, Wash., as Second Class Matter, under Act of Congress of March 3, 1879.

VOL. III. New Series. SEPTEMBER, 1911 No. 9

ORIGINAL CONTRIBUTIONS

SURGICAL OPERATIONS ON THE OBESE AND THE ADVANTAGE OF PREPARATORY FASTING.*

By A. E. Rockey, M. D.

PORTLAND, ORE.

Obesity is a well recognized impediment in nearly all of the activities of life. As the condition itself is not a protection against those disorders which require operative interference, the surgeon is confronted by a most undesirable impediment in the operations that obese persons from time to time require. For the surgeon the question has a dual interest, first, in the excision of undesirable masses of fat and, second, in methods of operative procedure for purely surgical conditions. Both of these, and particularly the latter, are intimately associated with a proper preliminary preparation of obese persons when the conditions present permit of time for such preparation.

This subject is one that has long interested me. In the August number of the *Pacific Medical Record,* for 1893, as the *Medical Sentinel* was then called, I published a paper on "The Surgical Treatment of Diffuse Pseudo-Lipoma." This term was applied by Sir Benjamin Brodie in his lectures on pathology and surgery, which were published in 1846. Sir William MacCormack, of the St. Thomas Hospital, in 1882, reports four cases of symmetrical development of fat at the back of the neck on which he had performed the operation of excision. In 1886 Baker and Bolby, in *The Medical and Surgical Transactions,* published a brochure in which they conclude that these growths are merely hypertrophies in loco of the subcutaneous fatty tissue. W. R. Williams, in 1899, presented to the Pathological Society, of London, "An Analytical Summary of Pseudo-Lipoma." One of the cases he reports died while under observation. The growth was a pendulous condition of the buttocks, and when removed at autopsy weighed 80 pounds.

The pendulous condition of the abdomen is by far more common than the diffuse masses on the neck or buttocks, and it is for this condition that surgeons are more frequently called upon for relief. In my paper of eighteen years ago, to which I have referred, I reported a case of a man weighing 330 pounds with a pendulous abdomen reaching half way to the knees (Fig. 1). The umbilicus had dragged down almost to the pubes, and had a depth just equal to the length of the index finger. I devised and performed an operation for the excision of this mass by transverse incisions extending across it at the level of the umbilicus above, and in the supra-pubic line of the fat fold below. The total combined length of these incisions was five feet and nine inches. The transverse incisions were placed immediately over eachother, but included a flap of integument measuring thirty two inches. The inverted "V"-shaped incision above, over the umbilicus and including it, made an equilateral triangle of about eight inches. Flaps of a little more than an inch in thickness were dissected up as far as the top of this incision, and the entire mass of fat removed in one piece. An umbilical hernia was uncovered and sutured. The operation was done without an anesthetic, and we were fortunate in securing primary union.

Subsequent to this I operated on several other cases, on one of which the total length of the incision was six feet. The mass of fat removed was not quite as large as that in the first case referred to.

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*Read before the Whitman County Medical Society and Northern Idaho District Medical Society, Pullman, Wash., June 12, 1911.

These cases, however, are but pigmies compared with the one on which Pean performed a series of excisions, and which is made the principal observation in a thesis on "Des Larges Excisions de Tissue Adipeux Ches les Obeses," Dr. Rene Gautier published in 1895. This author advocates excision of these masses by transverse incisions much after the method published in my paper. Pean's patient was a woman weighing 235 kilograms. Her picture is herewith reproduced and renders further description of the case unnecessary (Figs. 2 and 3).

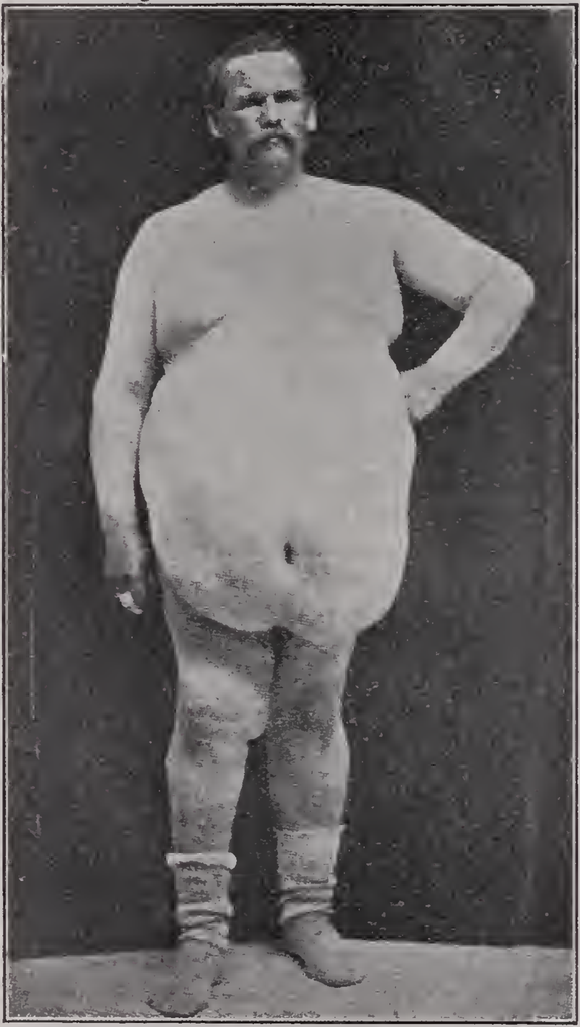

Fig. 1.
Author's case of Pendulous Abdomen.

Ten years later, and also more recently, Kelley of Baltimore, who seems to have overlooked both of these papers, published a description of a similar method of operation.

In the light of a full experience I am now less inclined to recommend these operations than I have been in the past, for the reason that general obesity may be so surely and safely relieved by fasting, the details of which I shall refer to presently.

There is another phase of the subject which should interest the surgeon, and that is methods of operation of the obese where suitable time for preliminary preparation cannot be taken. The most important of these are acute abdominal disorders, particularly those of the pelvis, appendix, and gallbladder regions.

In a vertical incision into the abdomen of obese persons the traction lines of the lateral fat masses, as the patient lies on her back during convalescence, are directly away from the incision line, thus predisposing to separation of the surfaces. The incision to be preferred in pelvic operations on obese women is the transverse incision of Pfennenstiel. The reason of its advantage is that the fat in the transverse fold across the lower part of the abdomen is usually thinner than it is farther up, the fascia being cut with the fatty tissue and separated from the surface of the muscles, and maintains its structure. The occurrence of ventral hernia is thus obviated. In the subsequent healing a gentle elevation of the upper part of the body presses the upper parts together. In

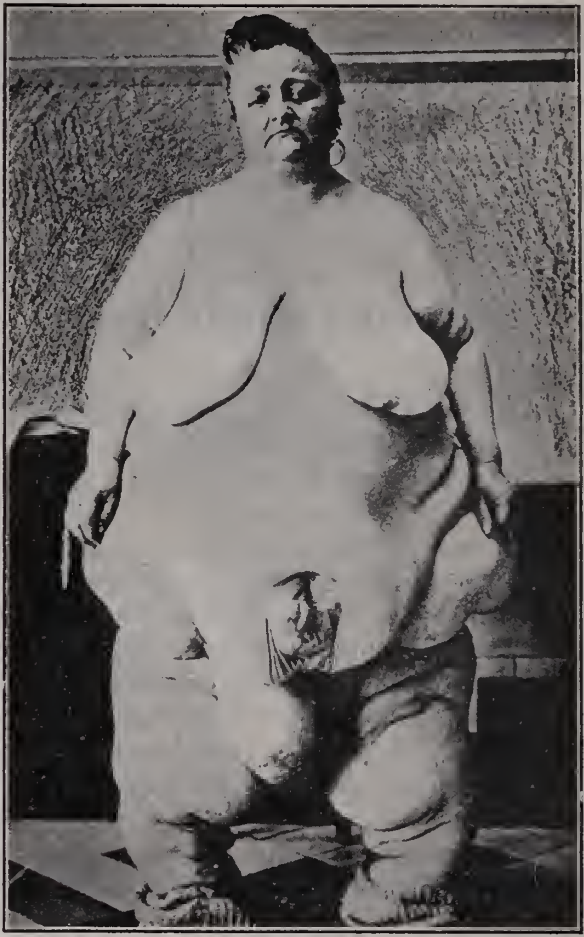

Fig. 2
Pean's case of Excision of Fat Masses.
(From Gautier's Thesis.)

the appendical region the transverse incision which I originally proposed in a paper in the *Medical Record,* in November, 1895, and later in NORTHWEST MEDICINE, is of value for the same reasons.

In the gallbladder region I have not been able to satisfy myself of any superior advantage of the transverse incision, and I continue there to use vertical incisions on the same lines as on thinner subjects. In gallbladder operations on the obese, and we know well they are common enough, the main mass of the fat lies below or at the lower part of the incision. If the patient be somewhat raised on pillows the downward traction of the abdomen diminishes the lateral pull of gravity. I have attempted here to illustrate the gravity pull of fat masses of various abdominal incisions by a series of diagrams (Figs. 4, 5, 6, 7).

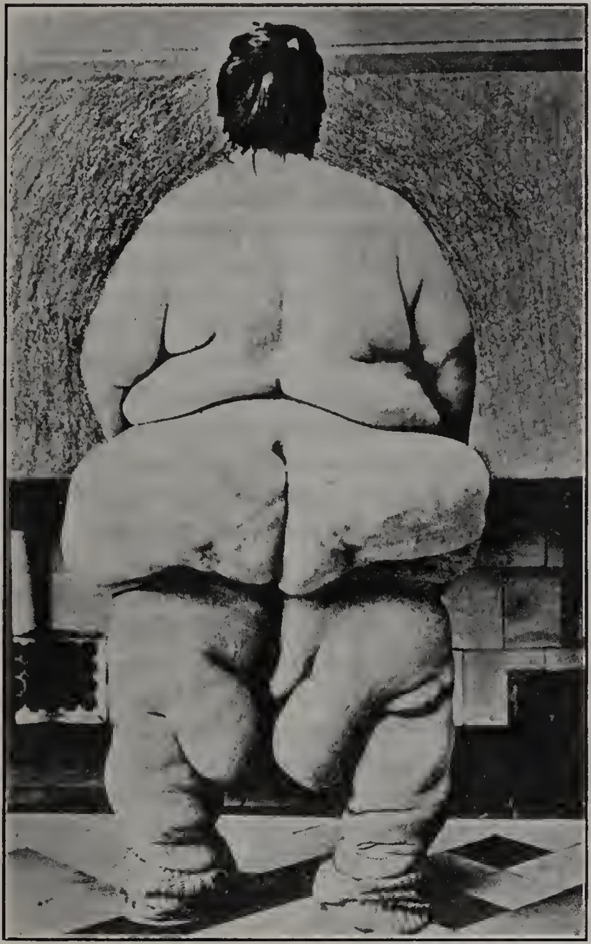

Fig. 3.
Pean's case of Excision of Fat Masses.
(From Gautier's Thesis.)

The reduction of obesity by various forms of light diet and by exercise has had much attention from the medical profession, but the advantage of absolute fasting for considerable periods of time has as yet been left largely with a group of charlatans and lay enthusiasts who have gone to the extreme in their claims for its benefit, and have applied it haphazard not only where it was reasonably indicated, but even in emaciating diseases as well. By its misapplication they have not only inflicted great harm to individuals whose physical condition was totally unsuited to a limited diet, but by the evil results have retarded the legitimate application of the method in suitable cases.

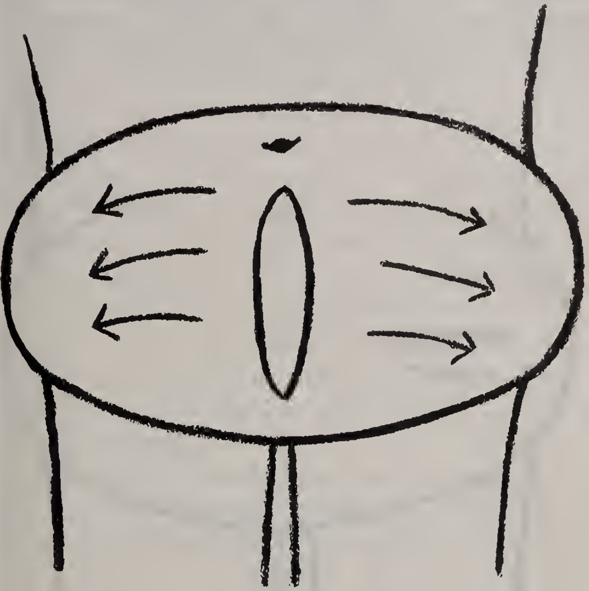

Fig. 4
Showing lateral gravity traction lines pulling wound apart after vertical incision of an obese abdomen.

It is not my purpose to discuss the question of fasting as a remedy in general disease, though I may say here that it is a fertile topic which I recommend to the attention of internists. Only through a scientific, clinical, and physiologic study of the method at the hands of competent men can it be rescued from the unfortunate position in which it has been placed by the spectacular exhibitions of Dr. Tanner and the irrational claims of Dewey and his more recent followers.

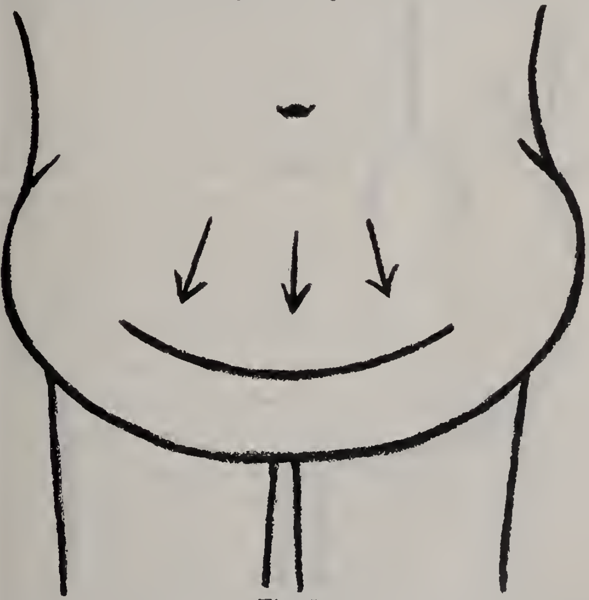

Fig. 5.
Showing gravity lines closing transverse incision of Pfennenstiel.

The chief advantage of an absolute fast over dietary regulation in obsese subjects is the ability to more completely control the nutrition of the patient. Obese subjects are sometimes prone to be very self-indulgent in the matter of food, and the attempt to reduce them by limited diet results frequently in the heroic efforts to diminish the quantity of food they ingest by partaking of small meals which act rather as teasers for a ravenous appetite than for the successful satisfaction of hunger, and the result is often a failure to secure any material reduction in the weight through a gradual resumption of their usual habits of eating.

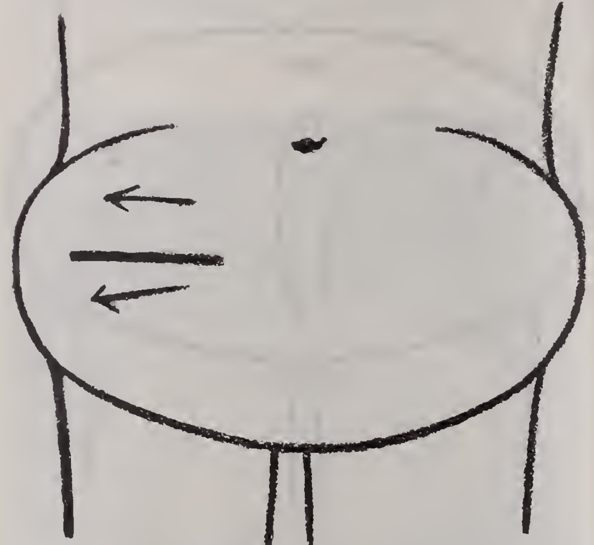

Fig. 6.
Showing gravity traction in same line with the author's transverse incision for appendicitis.

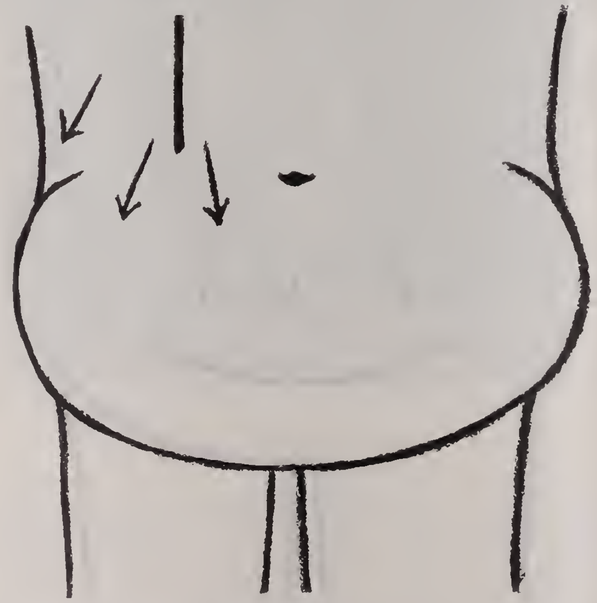

Fig. 7.
Showing vertical traction lines after gall-bladder operations if the patient is slightly elevated.

Yeo publishes a table which shows the comparative loss of the tissues in starving animals which places the fatty tissues at 97 per cent., and then in a diminishing scale to the central nervous system, which shows no loss whatever.

By absolute fasting is meant absolute abstinence from food, which means to exclude everything but water and certain salts which are constantly in process of elimination, and whose presence favors the necessary metabolism for appropriating residual fat for the sustenance of the individual. In carrying on a fast I have adopted a plan of giving each day a small amount of common salt, say from one-quarter to one-half teaspoonful in a glass of water, and at some other interval a teaspoonful of sodium bicarbonate. It is advisable also once or twice a week to thoroughly flush the alimentary canal by a large dose of sodium phosphate, preferably given in a glass of hot water in the morning. The latter procedure aids very much in preventing a foul condition of the intestinal tract, which otherwise takes place at the latter part of the first and during the second week of an absolute fast. An additional advantage of the salt and soda is in appeasing the sense of hunger which is otherwise somewhat troublesome during the first few days, but which in nearly all cases that have been under my observation disappears by the third day. Water should be taken freely at four or five regular intervals during the day throughout the entire period of the fast. It is indeed not uncommon to find the tendency to activity and the ability to exercise increase very much in cases of excessive obesity.

My attention was first attracted to this subject during the study I made about the time I performed the operation which I described in the paper of 1893 already referred to, and since that time I have made a number of observations on the preparation of obese persons for surgical operation by a preliminary course of fasting. The purpose and method are well illustrated in the following case brought to me something over a year ago by Dr. Wiswall, of Vancouver, for operation for large umbilical hernia which had recently given much trouble.

Housewife; age forty; short in stature; weight 318 pounds. As her hernia was simply an open safety relief for the enormous intra-abdominal pressure caused by fatty accumulations on the viscera, I advised the doctor that it would be necessary to diminish her weight before performing an operation. A preliminary course of absolute fasting after the method I have just detailed was advised. It was thought that a continuous fast of thirty days would be sufficient to accomplish the necessary reduction of her obesity. After a careful explanation she consented rather dubiously to adopt the plan, but she assured me that if for any reason she missed a single meal she became so weak from lack of food that she could hardly continue her work. I told her that the sense of satiety which she mistook for satisfaction of hunger was an error in her feedings, and that within a few days she would not only cease to feel it, but would be strong and more active in her work. She returned to her home and carried out the plan so successfully that at the end of 30 days she was doing so well she voluntarily added seven days more, and then broke her fast, not because she felt hungry, but because she was urged to do so by the anxious relatives who feared some harm might come from the long abstinence from food. At this time she weighed 248 pounds, a loss of 70 pounds. This is the largest loss of weight I have noted during any single fast. After a few days of very light diet, which I think quite advisable in the re-establishment of the alimentary functions previous to the performance of an operation and then followed by a thorough clearing of the intestinal tract by aperients, the operation for her hernia was successfully performed and she made an uninterrupted recovery. By this time she had also learned that it was not necessary to gorge herself with food, and for some months she continued on a very light diet with some diminution of her weight. Subsequently, however, her old habits returned and Dr. Wiswall informed me recently that she again weighed over 290 pounds.

As a rule the fast is carried on without discomfort. On the contrary, there is commonly observed an improvement in spirits and the feeling of general well-being. Occasionally, however, nausea occurs. In such cases if the stomach be not relieved with a draft of water containing some sodium bicarbonate a little orange juice in water may be given. This has seldom been found necessary, but it may be well to remember it.

Only a week ago a patient who had some time previously undergone a three weeks' fast, previous to an abdominal operation, announced to me voluntarily that she intended taking another fast, as she was so much improved by the first one.

Except the case mentioned above I have had no experience with a fast longer than twenty-eight days. I doubt the wisdom of the excessively long fasts that have been occasionally enforced by fasting specialists, and would place forty days as a maximum to which it would be wise to extend a total fast, and this only in obese or plethoric patients. Indeed, I think this length of time is seldom necessary. I want again to emphasize my condemnation of the method in poorly nourished or chachectic individuals, and to urge watchfulness of the patient's condition, and that this rather than a definite number of days determine the end of the fast. Further experience by trained observers, however, will demonstrate the advisable length of time.

There is much, I believe, to be gained through thoughtful consideration and careful use of this method with the co-operation of physiologists who have laboratory facilities for conducting experiments in a scientific manner. The safety and expediency of the method I have demonstrated for myself beyond cavil.

ARTERIOSCLEROSIS WITH ESPECIAL REFERENCE TO THE HEART AND KIDNEYS.*

By Carl Neu, M. D.,
SEATTLE, WASH.

A man from 35 to 40 years of age may step into a doctor's office and complain: "Doctor, I am not feeling well. I am getting tired easily, feel dizzy occasionally and cannot do the work that I used to do. I guess I am all run down and need a tonic." After a more or less careful examination the doctor cannot find any symptoms that would justify him to make a diagnosis. The patient's heart, lungs, etc., appear normal; there is no albumin nor sugar in the urine, merely a slight degree of constipation due to sedentary habits. So the doctor comes to the conclusion that the suggested tonic will be the right thing for the patient.

If, in his first examination, he had made a very minute test of the urine, for instance acetic acid and ferrocyanide of potassium, he probably would have discovered traces of albumin, without casts or cells being present. Further, if he had used a blood pressure apparatus, he certainly would have found a figure 15-30 mm. Hg above normal, indicating that something was wrong in the circulatory system.

Take another frequent case for an example. A woman between 40 and 50 is complaining of headache, dizzy spells, occasional short breathing. Her eyesight and hearing are not as good as they used to be. Examination shows albumin present, hyaline casts in small numbers, heart enlarged, its sounds rough, second aortic accentuated, no murmur, blood pressure 150-160 mm. Hg according Riva Rocci. This case may be diagnosed as a beginning of Bright's disease, but it is not.

Both cases merely represent two different stages of arteriosclerosis involving the smaller and smallest arteries. The number of people suffering from arteriosclerosis is far greater than even the majority of professional men are inclined to believe. It is true that most arteriosclerotic patients do not die of arteriosclerosis, but succumb to intercurrent diseases like pneumonia, influenza, nephritis and others.

The presence of arteriosclerosis, however, influences all intermediary diseases so considerably and is of such importance in a prognostic sense, that we never should omit to ascertain if it be present and to what extent. May I only remind you here of the evil prognosis in cases of bronchitis or grippe when the patient at the same time has had arteriosclerosis for several years.

It seems as if the number of arteriosclerotic people were increasing steadily. Our finer methods in diagnosis may be responsible partly for this fact. Of more importance, however, is the observation that the disease occurs earlier in life than was known before.

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*Read before King County Medical Society, Seattle, Wash., June 5, 1911.

For clinical reasons we can classify arteriosclerosis in two main groups:

I. The atheromatosis of the smaller and smallest arteries.

II. The sclerosis of the larger arterial blood-vessels.

In the following I intend to confine myself almost entirely to the first group.

To understand thoroughly clinical symptoms in arteriosclerosis, it is necessary to be familiar with the pathologic conditions of the disease. The process begins in the large cells of the intima lining the inner wall of the arteries. The formerly transparent and uniform protoplasm is gradually undergoing a change that results in, first, cloudy swelling; second, fatty degeneration with the formation of sclerotic tissue and the deposit of organic and inorganic substances.

Cloudy swelling means the formation of a cloudy, albuminous substance in the cell protoplasm. It is not fat that obscures the nucleus of such a cell for, by treating it with diluted acetic acid, we are able to dissolve the cloudy substance and make the nucleus visible again. With the appearance of cloudy swelling the cell body swells up and demands more space. Biologic chemistry has not been able up to this time to decide the exact composition of that cloudy, albuminous substance, and we do not even know whether it is derived from the protoplasm by retrogressive change, or if it never has reached that high state of assimilation. May it suffice to say that a cell body with cloudy swelling is insufficient functionally.

The next step is fatty degeneration—not infiltration—with the appearance of round cells and spindle cells under the endothelium. These cells bring about the formation of connective tissue and finally sclerotic tissue of striped or homogeneous character. When that far, the process is finished in the smallest arterial vessels where we have to deal only with intima. Not so in the arteries of larger caliber. Here you may find under the intima and in the muscular wall lacunae filled with fatty detritus, cholesterin and inorganic substances, mostly calcium salts. All these pathologic changes need years to develop. The place where small arteries branch off from larger ones seems a predilected starting point.

The macroscopic symptoms of the atheromatous changes are the following: The former smooth and shining surface of the intima will become uneven, granulated and rough. The lumina of the blood vessels will become narrower, although there may result on some points of special tension aneurismal enlargement. The course of the smaller arteries will become crooked, for the pathologic process evolves irregularly. The elasticity of the blood vessels disappears gradually.

What will be the clinical result of the new conditions? On account of the narrower channel through which the same amount of blood must pass at a given period, the tension naturally becomes higher, the more so as the inelastic wall of the arteries itself would raise the blood pressure. In addition to that there will be considerable friction of the blood cells on the uneven and granulated surface of the intima. To get an estimation of the friction in the smallest arteries and capillaries, we must remember that the width of the capillaries varies from .005 in the eye to .02 mm. in the bones, through which red blood cells of an average diameter of 7.2μ have to pass. Therefore, it cannot surprise to find in extreme cases of arteriosclerosis a blood pressure of twice and more the normal figure.

To keep up the oxygen supply of the tissues the heart muscle has to respond to the new conditions by greater efficiency, which means hypertrophy of the left ventricle. Greater efficiency of the heart, again, will raise the blood pressure in the inelastic arteries and force the blood vessels to strengthen their walls by forming more sclerotic tissue. This latter condition, again, will call on the heart for greater efficiency and so on and on in a circulus vitiosus.

The human heart will meet the impediments in the circulation by hypertrophic growth of muscle flesh, principally of the left ventricle. Its weight will gradually go up from oz.10 to 20 and 30. The muscular wall of the left ventricle frequently will be found two and three times as thick as under normal conditions. The valves, especially the aortic which is laboring under a pressure of 300 and more mm. Hg will have to strengthen its tissues; it will grow thicker, rougher, finally depositing lime salts between its fibres. Hence the rough heart sounds and the accentuated second aortic. There will be times when such an overburdened heart will get tired; the pulse will become irregular, some pulses being of high tension others of hardly any—all signs of lost compensation. The heart is not capable of keeping up the oxygen supply, the circulation being insufficient. More hypertrophy will overcome the difficulty until the next demand is made upon that organ to increase its efficiency. This circulus vitiosus will go on until a ruptured blood vessel will give the heart its final rest, or it refuses to work any longer and stops in diastole.

Other organs affected in the early stage of atheromatosis are the kidneys. In addition to the general difficulties in the circulation, we have here local conditions which suffer more by any disturbance in the blood stream. Take the long, narrow channel of the Malpighian bodies which are supposed to let water and salt solutions filter into the tubules, but no albuminous substances. By the atheromatous process the intima cells will first enlarge under cloudy swelling, round cells will appear inside the Malpighian capsule—pathologically known as glomerulitis. Later on, the glomerulus will shrink, the capsule will become thicker and, together with the formation of connective tissue along the rest of the blood vessels, will represent the so-called form of nephritis interstitialis.

Small amounts of serum-albumin will pass through the walls of the Malpighian capillaries into the tubules and show in the urine the first symptom of nephritis atheromatosa. In this early stage of atheromatosis the secretive cells of the organ are not affected, and here is the difference between Bright's disease and nephritis atheromatosa. In Bright's disease (let us substitute the pathologic name sub-acute parenchymatous nephritis) it is the secretive epithelial cells that originate the disease—which is very different from arteriosclerosis. It is of great importance from a clinical standpoint to know this, for a person may have a sclerotic kidney for years without any apparent bad results to his health. The small loss of albumin by leakage is not of great amount, as the body easily will compensate it. But our patients will be free from urotoxic symptoms in atheromatosis for a long time, say years, and if headache should occur occasionally, it is due to temporary anemia of the brain, a well-known symptom in arteriosclerosis which calls for a treatment entirely different from that necessary in cases of urotoxemia.

There are a number of symptoms which enable us to differentiate early atheromatous nephritis from the parenchymatous form. Quantity and specific gravity of the urine will appear about normal. If albumin be present, it is only in small amount and microscopically the sediment will be negative, unless there should be a few hyaline casts. The abscence of epithelial cells, free or covering casts, forms the important point in differential diagnosis, together with normal gravity and quantity, whereas in parenchymatous nephritis you will find a subnormal quantity of a twenty-four hour specimen, high specific gravity, greater amount of albumin, generally red blood cells, kidney epithelium, casts covered with epithelial cells, etc.

By giving a patient with an atheromatous kidney an absolute rest in bed and adding a slight heart stimulant, one will always succeed in freeing the urine of albumin in a few days. Of course, it is unnecessary to state that in the later stages of arteriosclerotic nephritis the epithelial elements also will suffer to some extent, and it is also well known that nephritis atheromatosa frequently may be combined with the parenchymatous form.

Thus far I have been considering early symptoms of arteriosclerosis almost exclusively. The conditions in the later stages can hardly be mistaken and are not of sufficient interest with which to take up your time.

Now the question comes up, what causes the intima cells to undergo such pathologic changes. You may find mentioned in all the text books syphilis, nicotine, alcohol, over nutrition, excessive manual labor, worry, excitement and so on. The multitude of given causes seems to prove that we actually do not know at present the real, direct cause of the disease, but it seems to be generally understood that it is not infection. Some authors are inclined to believe that a certain degree of arteriosclerosis should be considered as physiologic. That would not explain why in a great number of cases the atheromatous process starts in the early thirties. These cases point strongly to the fact that there must be circulating in the blood a substance which influences the endothelial cells in such a way that regressive changes take place. The oldest theory of a mere mechanical origin through plethora and excessive heart action is insufficient in itself to explain the beginning of arteriosclerosis, for there are a good many cases that never had been exposed to either of those agents. On the other hand, we all could enumerate a great many patients whose circulation had been exposed time and time to excessive high tension, and yet they never developed arteriosclerosis.

Let me call your attention to the internal secretion. You are well acquainted with the fact that adrenalin and other paranephritic substances, brought into the circulation of the human body, will raise the blood pressure instantly. This is due to a maximum contraction of the capillaries. Now suppose that, for some unknown reason, alcohol, nicotine, syphilis and so forth should cause a constant hypersecretion of the paranephrons, would it not be probable that, under the continuous irritation of these paranephritic substances, the protoplasm of the endothelium would undergo such a degenerative change as finally to result in arteriosclerosis?

We are at present not in any position to prove that such hypersecretion is actually going on, for the local examination of the suprarenals does not reveal anything to form conclusions upon their function, and the chemistry of the different organic substances in the human blood is too little known to be of any help as yet. What I want to say is that syphilis, nicotine, alcohol and so forth cannot be considered as direct causes of arteriosclerosis, but indirectly they may under certain conditions be responsible for the formation of substances which themselves are the real and direct cause of the disease.

Whether people living in a high altitude are more liable to acquire arteriosclerosis than their brethren on the lower plains is unknown to me. One may find them in any altitude in abundant number. I would not even venture to say that the disease is more common among the upper classes with their high living. for in a four years experience as physician among a rural population of Alsace, arteriosclerosis was a most frequent cause of death. I should wish that some of the members could tell something about the frequency of the disease among negroes and Asiatic peoples. I was unable to ascertain any knowledge concerning this point.

What can be done for people suffering from arteriosclerosis? Are there any means to cure the disease? As this matter will be treated extensively tonight by another member, I will confine myself to a few general remarks.

I will try to give, in short, the standpoint of Prof. Schott, Grödel and others of Bad Nauheim, a resort with mineral springs where annually over 20,000 arteriorsclerotic patients come under observation. In any stage of arteriosclerosis a restitutio ad integrum is impossible. We do not know of any remedies that would alter a process of degeneration so that, instead of sclerotic tissue, young elastic protoplasm would be substituted.

All we can do is preventing this disease from running too swift a course, and then bring about a compensation of the heart from time to time, as demanded by the prevailing conditions of the arterial system. Of the drugs used for altering or retarding the sclerosizing process, we have long known potassium and sodium iodide, mercury—especially in cases of suspected syphilis——and arsenic salts. A more recently recommended remedy for the same purpose is "antisclerosin" which consists practically of all the salts generally present in the human blood. The underlying idea for this latter preparation is the theory that the first changes in the intima cells are caused by a demineralization of the blood.

More important than drugs in our cases is the prescription of diet and a daily routine of living. According to the Nauheim regulations, an arteriosclerotic patient should not indulge in alcohol, nicotine. coffee, strong tea and big dinners as a rule. Not too much meat, more vegetables and milk. Food and drink should be taken in small quantities at a time, and so prepared as to make them easy digestible. Any muscular exertion or mental excitement that is liable suddenly to raise the blood pressure should be avoided. Great importance is given to the advice to abstain from sexual intercourse. When we stop to reason why so many cases of apoplexy occur at night time, when blood-pressure is supposed to be at its lowest point, we can not fail to appreciate this advice.

Baths should be neither hot nor too cold. About 86° is said to be a right average temperature. The more recent treatment of arteriosclerotic patients—by some claimed as specific for this disease—consisrs of baths charged with CO_2 or O_2. This treatment has in my opinion nothing whatsoever to do with the arteriosclerotic conditions, but is simply a very strong agent to increase the efficiency of the heart and restore the compensation in the circulation.

In Bad Nauheim, where the natural springs contain as much as 2,000 volume per cent. of Co_2 in one thousand cc. of water, I have seen arteriosclerotic patients die after taking a few baths. It must be admitted that most patients breathe easier and feel lighter and freer under the influence of such a strong heart stimulant, but it is like the spur to a horse, it will brace him up but will not prolong his life. In my opinion stimulants should not be given in the early stages of arteriosclerosis, but rest, both physical and mental. Each arteriosclerotic patient ought to take an annual vacation of four to six weeks in perfect leisure, and for the rest of the year should be advised to go slow. If he cannot work ten hours a day, let him be satisfied with eight. In handling our patients in such a manner we should be able to safeguard them for years and make them enjoy life up to an age not far from the normal.

SOME RECENT FORMS OF TREATMENT FOR ARTERIOSCLEROSIS.*

By W. C. Heussy, M. D.

SEATTLE, WASH.

The most important of medical cases to treat are those of arteriosclerosis. At present its pathology is not understood, it being in a transitional stage, but much work is being done along this line. The condition reveals itself in a protean way. It may go on insidiously for from five to twenty years, and during this time be unknown to the patient or medical consultant.

In the evolution of life, from embryonic, adult to old age, one is the outcome of the other. During this evolution certain vasomotor phenomena present themselves. In infants and youth, blushing easily occurs. As age advances there is a gradual obedience of the response of the capillary area till in middle life absence of blushing is reached. The middle coats of the vessels then have given place to fibrous tissue. In the child, the vascular area is very large and the blood pressure is low. Its circulation is much shorter and nutrition is well subserved. As the child grows there is a diminution in its vascular area and with this a gradual increase in the blood pressure occurs, with a corresponding lessening in its rate of flow. At the age of ten, the capillaries to some extent cease to grow; at puberty these changes become more marked and as age advances the high blood pressure begins to tell on the vessel coats.

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*Read before King County Medical Society, Seattle, Wash., June 5, 1911.

Formerly it was thought that arteriosclerosis first occurred and high blood pressure was a result or effect, but it is just the reverse—high blood pressure first and arteriosclerosis second. Many cases of arteriosclerosis present no rise whatever in blood pressure. Why is this? It is because the arterioles of the splanchnic area, where the blood pressure is regulated, are not affected. There may be a high blood pressure for two, three or five years because of changes taking place in this area, during which time none of the other vessels of the body show any change whatever. With an early rise in pressure the radial pulse is elastic, the change being in the vessel walls of the bowels in the splanchnic plexus, or renal area. A high blood pressure of the radial or brachial arteries, is not to be had in arteriosclerosis, unless there has been a previous change in the arterioles of the splanchnic area.

Sir Clifford Abbutt states there can be no question that in many individuals the rise in pressure antedates the appearance of arteriosclerosis. This is a very important consideration in regard to treatment. Every case which has an elevation of blood pressure and has resulted in arteriosclerosis has had a presclerotic stage, during which only the high blood pressure existed, arteriosclerosis not being reached. This is the hopeful stage. It is in this presclerotic stage that treatment is effective and it is the stage which must be recognized. If neglected, surely degeneration, fibrosis and calcification follow. The damage then is irreparable and, as Osler puts it in the nursery version, "all the King's horses and all the King's men could not put Humpty Dumpty up after his fall." Hygienic, dietetic and medicinal measures will fail to restore the normal structures of the arteries.

If, in this stage, the blood pressure can be lowered and kept down, good is being done. The rise in pressure causes a constant stretching of the arterial system, especially in the arterioles, because they are the vessels which regulate the pressure. These arterioles dilate and contract according to the wants of the individual. Clinically, this arteriosclerotic change is not evenly spread over the whole body. Cases may present cerebral, pulmonary, renal or pancreatic symptoms. Many cases of advanced diabetes are a result of arteriosclerosis of the pancreas. The vessels leading to the brain and heart maintain their structures better and are the last to show a change.

Too much importance must not be given to one factor. In every case the source of intoxication or infection must be looked for. Syphilis, gout, lead poisoning, toxins from the alimentary canal produce the first effect, namely, high blood pressure. Treatment depends on the etiology and in most cases there are many different factors, two of which stand out prominently, namely, hereditary qualities and the occurrence of a previous infection. Some cases start out in life with less elastic fibres than others, such individuals being more liable to arteriosclerotic changes. The occurrence of a previous infection is the greatest factor. Care should always be taken after any acute illness or infection in giving convalescents plenty of time to eliminate the toxins and repair the damage which has been done to the system by the toxemia of the disease.

Alcohol, tobacco and autointoxications are factors in the causation, especially long continued indulgence with alcohol or long continued gentle drinking with excessive smoking. Tobacco is a great factor in the causation, especially when its use was begun in early life. Smoking on an empty stomach in the morning brings out the bad effects of tobacco. Two to two and a half ounces a week should be the maximum amount used. The physical and mental strain of city men keeping themselves at a high tension with insufficient relaxation of mind and body result in this disease of wear and tear.

Defective feeding and oral sepsis are very important in inducing arteriosclerosis. Sooner or later nature will exact its toll from the constant absorption of septic material from diseased gums and teeth. As a result of defective feeding and oral sepsis, various alkaloids such as neurin, cadoverin and indol are produced under the influence of various bacteria taken in with the food. The ordinary bacteria, like the natural enzymes which have the power to split or alter proteids and carbohydrates of the food, are destroyed by these septic organisms swallowed with the food.

The drugs used in the treatment of arteriosclerosis are the nitrites, nitrates, iodides, thyroid gland, benzoates, hippurates, diuretin, Tormeczeka serum and antisclerosin.

The nitrates are vasodilators. They dilate the arterioles, allowing a free flow of blood through them and as a result the pressure is lowered. They are only for limited use. They include amyl nitrite, nitroglycerin, potassium and sodium nitrite, erythrol tetranitrate and manitol nitrate. The important thing to consider is, when do these substances act and how long does their effect last and when should their dose be renewed.

Amyl nitrite acts in three to five seconds. With nitroglycerin the pressure begins to fall in one minute, reaches its maximum in five and gradually rises until in thirty minutes the pressure is back to where it was before it was given, its whole action having passed off. With potassium and sodium nitrite the pressure begins to fall in four minutes, reaching its maximum in fifteen, gradually rising till in two hours the pressure is back to where it was before they were administered. With erythrol tetranitrate the pressure begins to fall in six minutes, reaches its maximum in twenty-five, gradually rising till in six hours the pressure is back to where it was before this was given. With manitol nitrite the pressure begins to fall in twelve minutes, reaching its maximum in one hour, gradually rising until six hours when the pressure is the same as before it was given. (Fig. 1.)

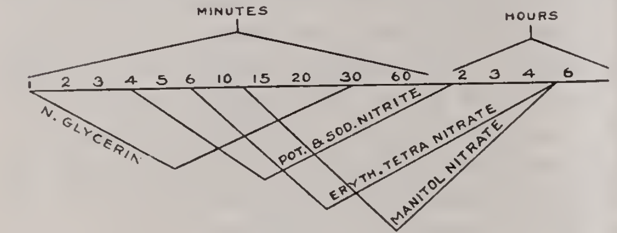

Fig. 1.

The nitrite or nitrate must be chosen according to the effect or result wanted. The amount of action of all of them is about the same. If the blood pressure be about 200, they bring it down to 160 or 165. They differ only in the time in which they act. When a sudden action is wanted nitroglycerin should be given, remembering that its effect passes off in thirty minutes. When a longer action is required give the others. Erythrol tetranitrate is the best. It begins to act in six minutes and takes six hours for its effect to pass off. Some people have an idiosyncrasy towards this drug, its action being so great and acting so quickly that it produces faintness and headache. Nitroglycerin is not good if a permanent action be wanted and it does no good to increase its dose as a greater effect is not produced. To get a longer effect use one of the longer nitrites or nitrates. Potassium or sodium nitrite should be given in 2 or 3 grain doses, erythrol tetranitrate 1-4 to 1-2 gain in tablet form, manitol nitrite 1-2 to one grain.

When are these drugs to be used? They only help in treatment. We always have a high blood pressure in Bright's disease and cirrhotic kidneys, which is necessary for the individual; he could not live without it. It is a conservative process because, to carry on the nourishment of the tissues, the blood must be driven through the arterioles with greater force as a small percentage of them are only in use. In disease of the kidneys, where the individual is having attacks of headache and vomiting, if the blood pressure be taken at the beginning of an attack it will be found there is a further increase in the pressure; it may be up to 220. If taken sometime before an attack we may find it 190, which is probably the standard for this form or type. Then bring it down to 190 by giving 1-2 grain of erythrol tetranitrate night and morning. In every sudden rise from the poison or toxin give either erythrol or manitol. They may be given four times a day to bring the pressure down to the standard. After this is reached gradually regulate the dose so as to produce a permanent effect.

Potassium and sodium iodide are vasodilators, having a certain vasodilator action, which diminishes the viscosity of the blood. They have an absorbtive and relaxing effect on the vessel walls, allowing a freer flow of blood through them. They seem to have a neutralizing effect on the toxic substances producing the pressure. They have very little effect in cases with a high permanent blood pressure, as in cirrhotic disease of the kidney. High pressure is necessary in this disease. When a sudden jump occurs give the nitrites or nitrates.

In other cases than Bright's the iodides are of benefit. Some cases may have a high blood pressure with no other symptoms, whose source cannot be traced. In such cases potassium iodide is very effective. The following case is a good example of giving potassium iodide, getting a fall in pressure, stopping it for a time and then, a rise occurring, administering it again and a lowering effect produced.

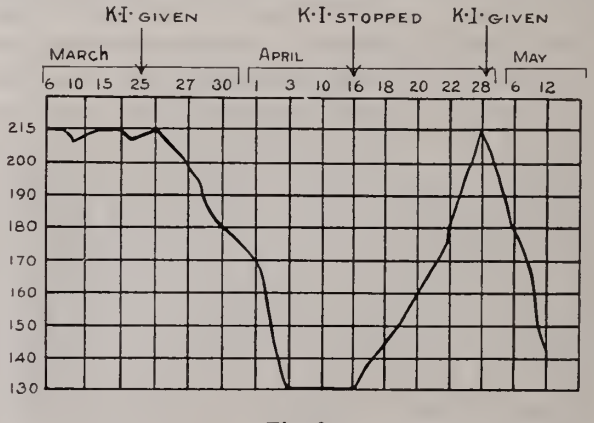

Fig. 2.

Male, aged 38, complained of headache, vomiting, giddiness, some loss in weight, a very slight trace of albumin in his urine. He had a high blood pressure. He gave an old history of bowel and stomach indigestion. He was not an alcoholic and smoked very little.

On the 6th of March his blood pressure varied from 205 to 220. He was given no treatment outside of something for his bowels. From the 6th to the 25th his blood pressure was 215. On the 25th he was given 10 grains of potassium iodide three times a day and no other treatment excepting a milk diet. On the 30th it was 180, April 1st 170, April 3rd 130, at which time he was very much more comfortable. On the 16th it was stopped, the blood pressure remaining stationary until the potassium iodide was eliminated, when it began to rise again and on the 20th it was 160, 22d 175, 28th 215, reaching again the height it was before the drug was given. On the 21st of May it was given again. On the 6th the pressure was 180, on the 12th 145. This man did not have much arteriosclerosis. If he had had, the potassium iodide would not have caused such a drop in his pressure. (Fig. 2.)

The blood pressure should always be taken between 10 a. m. and 1 p. m., as it has physiologic variations, but is constant between these hours. It is in the presclerotic stage that potassium iodide is of benefit. After the sclerosis has started and has gone on for two or three years a lessened result is to be had from its use. The more advanced the case the less the action of potassium iodide.

The treatment in the early stage is prophylactic. First of all always examine the teeth and gums. Regulate the bowels as constipation is associated with autointoxication. There is no appropriate diet; the previous dietetic history of the individual must always be considered. A very common dietetic error is the consumption of too much animal proteid food. Long continued excessive feeding results in a putrefactive condition in the alimentary canal and is one of the main factors causing arteriosclerosis.

Give the cases complete rest and a milk diet, attend to the teeth, eliminate tobacco and alcohol, later on give a light lacto-vegetarian diet, consisting of cheese, vegetables, fruits for six weeks. With a reduction in the blood pressure a favorable state of the blood vessels occurs. In a month or two a difference can be felt in the arteries. In old age give a diet which will restrict to a minimum any autointoxication, reduce animal proteid food, eliminate it permanently. Give vegetable soups two or three times a week. They should not be made from rich animal stocks. Substitute curds, custards and jellies of different kinds for puddings.

Calomel with a saline should be given every week and every two weeks a turkish bath, with special directions in each case for the bath.

THE FUNDUS OF THE EYE IN ARTERIOSCLEROSIS.*

By Geo. W. Swift, M. D.,

SEATTLE, WASH.

Ocular arterio or angiosclerosis presents in the eye fundus a characteristic picture. It is quite essential that we should have a clear understanding of changes occurring in the eye fundus, since nowhere in the body can changes in the vascular system be seen so clearly and studied as to the progress of the disease so carefully as in the retina.

Stengel has defined arteriosclerosis as a degenerative inflammatory condition of the vascular system. The etiology of the disease is in the main the same in the eye as elsewhere, though some observers maintain that a high arterial tension causes arteriosclerosis primarily in the retinal vessels.

The anatomic conditions found in the eye, namely the firm, tough sclerotic coat, form really a closed cavity in which the tension remains practically constant. The small vessels bounded on the outer side by this firm wall, on the inner by the semi-solid vitreous, are exposed to our view. We would naturally expect to see pulsation of the arteries, but this is not the case normally. The blood enters the vessels and courses through at a relatively constant velocity. This can be easily demonstrated by pressing the bulb while looking at the vessels through the ophthalmoscope. This increases the intraocular tension and causes a pulsation of the vessels. In other words, the retinal vessels do not normally dilate and contract with every heart beat but remain constant. When the arterial tension is greatly elevated and not the intraocular, these vessels must suffer. They do not dilate nor contract at once, but the velocity of the blood stream must compensate for the increased tension. Toxins in the blood may also be factors in changes which follow. This peculiar anatomic condition perhaps accounts for the early changes in the retinal vessels in arteriosclerosis.

The pathology also differs somewhat from that of the larger vessels. While early changes occur in the media or middle coat of larger vessels, the first change in the retinal arteries is in endo-arteritis, in the veins a peri-phlebitis. The lumina of the arteries become narrowed by a proliferation of the intima. This may occur at localized spots or along the entire course. When localized it presents a beaded appearance. Later changes involve the media, in which the elastic tissue increases. Meanwhile the lumen may become occluded from the proliferation of the intima.

The veins show first a peri-phlebitis, a delicate white exudate along the margin. Their wall is not so thick as the arterial wall. They dilate quite easily and bend at the margin of the disc. Where an artery crosses a vein, a bending of the latter is quite easily noticed. Frequently many of these can be seen in a single fundus.

The nerve head also presents a characteristic blurred appearance. de Schweinitz differentiates between the blurred nerve head of hyperopic patients, the flannel red disc of eye strain, and the disc in neuritis which is juicy red.

The clinical picture varies according to the progress of the disease. At first the corkscrew arteries and white lines along the veins, the bending of the veins and bulging above the point where an artery crosses a vein are characteristic. As the vessel wall hardens the tortuosity of the vessels increases. Hemorrhages may occur, aneurisms are quite common. The disc is blurred. The retina may become blurred and even degenerative whitish areas appear. In later stages, as the media is replaced by dense elastic tissue, a silver wire artery results.

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*Read before King County Medical Society, Seattle, Wash., June 5, 1911.

The onset of this condition may be at any time after the fortieth year. Cases of earlier appearance are recorded. Fortunately at this time most persons need their vision corrected. The oculist has an opportunity to examine the fundus. Should any of these changes be noted it is essential that a careful examination of the entire vascular system be made. Frequently only a decrease in the uric acid in the urine is found. This occurs long before casts or albumin in the urine are noted.

Kidney lesions are associated with ocular changes in about 20 per cent. of cases. Perhaps the percentage would be higher if all cases were examined at intervals up to the time of death. The chronic interstitial cases more frequently present changes. The retina also is involved in some cases as in albuminuric retinitis. This is associated with marked arterial changes.

In elderly people the majority of cases show senile changes, of which the silver wire arteries are most common. When these changes are present and the patient has a high bounding pulse, one should think of possible hemorrhagic glaucoma. This destructive type of glaucoma is due to hemorrhages into the retina or vitreous. These hemorrhages may at first be minute in extent. Small spots are seen by the patient, vision becomes dimmed, a dull pain in the eye is present. Examination reveals marked arteriosclerosis. Attention to diet, regulation of the arterial tension, and rest in bed often prevents serious trouble for a long time. An iridectomy is of little benefit.

As regards general condition of the patient, one might say with emphasis that the presence of changes in the retinal vessels, small corkscrew twigs of arteries, a more or less beaded appearance at the disc margin or where an artery crosses a vein, a peculiar blurred appearance of the disc margin all present the picture of a beginning arteriosclerosis and such a patient should be sent at once to his physician, who, in turn, should carefully examine for any signs of general arteriosclerosis. But in such cases you should bear in mind that the decrease of uric acid precedes oftentimes the presence of casts in urinary examinations, that a high arterial tension means more than merely a nervous patient.

HEALTH INSPECTION AS APPLIED TO THE INDIVIDUAL.

By E. V. Silver, M. D.,
SALT LAKE CITY, UTAH.

The care of one's health, when it comes to a discussion of its restoration, after it has been lost, is a very old topic, perhaps, you may say, a worn-out topic. Health inspection, as a wholesale proposition, as applied to communities, marks in its development the greatest advance in the application of science to human welfare. As applied to the individual, however, it is far behind what it ought to be. Hundreds of lives are lost every year and thousands of days of disability incurred, because it is not the custom for the health of the individual to be the subject of inspection in such a manner as to detect and remedy disease in its beginning.

There is not a physician here tonight who has not many times during his professional life, while examining a patient for some minor trouble, detected the signs of beginning organic disease, of which the individual was not aware. I have frequently, when examining applicants for life insurance, heard this statement made by some one whom I have told could not pass. "Why, I never knew there was anything the matter with me." I always answer as follows: "It is very fortunate for you, then, that you had this examination, for now you can have medical attention before it is too late."

Many persons die annually of kidney, lung and heart troubles; of cancer, diabetes and arteriosclerosis, who would have lived much longer if the diseases which occasioned their deaths had been recognized early and proper treatment instituted. Take diabetes, for instance. This is a disease which begins insidiously and may be present for years before giving any symptom which may be recognized by the patient and cause him to consult his medical advisor.

The apparently healthy form the largest class in society. These individuals must be advised to subject themselves to regular, systematic, medical examination at stated intervals, that pathologic conditions may be recognized at the earliest possible moment and treatment begun. We have been for centuries laughing at the Chinese, who pay their doctors only when they keep in good health. The time is at hand when we will laugh less and be compelled to say they are correct.

Sanitary science is now making progress at a tremendous rate and, largely as a result of this work, the average length of human life has increased nearly twelve to sixteen years during the past century, while the number of sick has grown correspondingly smaller, as we doctors have very good cause to know and feel. The possibilities of preventive medicine are tremendous as I showed in the address in medicine at Ogden. By preventive medicine we mean the measures taken by the state or city to prevent the occurrence or spread of disease, such as proper sewage disposal, pure water supplies, food inspection, proper drainage, street cleaning, factory legislation, medical inspection of schools, vaccination, quarantine, the destruction of disease bearing insects, and modern methods of treatment.

While the number of deaths from communicable diseases is decreasing, there is no corresponding falling off in the number of deaths due to the so-called chronic affections—those due to the degenerations common after middle life. These show an alarming increase. Let us look at these facts more in detail. Prof. Irving Fisher, of Yale University, in a recent article entitled, "National Vitality," calls attention to the appalling fact that over 600,000 persons die annually in the United States of preventable diseases, and that 3,000,000 persons are annually seriously ill, one-half of them needlessly so. E. E. Rittenhouse, of New York, in a recent article entitled, "The State and the Death Roll," shows clearly the increased death rate from heart, kidney, brain and arterial diseases. Permit me to give you some figures. During the year 1908, according to the reports from the registration areas of the United States, 80,000 persons died from tuberculosis, 12,000 from typhoid fever and 62,000 from pneumonia. There were 92 deaths from small pox and only 2 from yellow fever. Those are the diseases which are regarded as communicable and controllable. The number of deaths from these is decreasing rapidly every year, as a result of preventive medicine, pneumonia perhaps excepted. During the past 30 years, the death rate has fallen four per cent. between the ages of 20 and 30, and 15 per cent. between the ages of 30 and 40. Youth and early adult life are affected largely, though not wholly, by contagious, communicable diseases.

Also, 60,000 persons died from heart diseases, 40,000 died from kidney affections, and 33,000 from cancer, while those who died from apoplexy number into the thousands. These are the diseases due to the degenerations so common after middle life. They show a constant and an alarming increase.

Between the ages of 40 and 50 the death rate has increased 35 per cent., between the ages of 50 and 60 24 per cent., while between the ages of 60 and 70, it has increased 34 per cent. While the death rate from tuberculosis during the past 30 years has fallen off 49 per cent. in the registration area of the United States, the death rate from kidney diseases has increased 131 per cent. In the same area the death rate from heart disease shows an increase of 57 per cent. and from apoplexy 84 per cent.

The loss of adult American life from the more important, non-communicable diseases has increased, therefore, with extraordinary rapidity. Two persons die now, where only one died 30 years ago, from preventable or postponable diseases of heart, kidney, arteries and brain. What has caused this astonishing increase in the death rate of our adult population? Careful study of statistics available causes me to come to but one conclusion. Excess in eating, drinking and working, in short, intemperate living and the "strenuous life."

The prevention of these deaths from kidney, brain and heart diseases is just as deserving of attention by the nation and state as those due to typhoid fever, malaria, yellow fever and tuberculosis. The former, however, must be controlled by individual prophylaxis, as the latter have been and are being so wonderfully controlled by the intervention of the state, city and national government.

It is a common practice for our citizens to pay a visit of inspection to the dentist every few months, to have suspected cavities in their teeth subjected to proper treatment. They do not consult the dentist because their teeth ache or because they know positively that they need attention, but because they know the inevitable tendency to dental decay. These very persons may suffer from a severe cough for weeks or months before they will consult a physician, while all the time a cavity may be forming in their lungs. We must urge the apparently healthy to subject themselves to a physical examination at stated intervals, so that pathologic conditions may be remedied. It is the duty of our profession to educate the people to undergo this periodical examination, even though they seem to be in perfect health. Human suffering would be greatly minimized and human life greatly lengthened, if this were done.

The case books or listing cards of every physician here, whether in general practice or as specialists, contain the histories of dozens of cases who go on for years in a state of apparent health and never consult a physician until obliged to do so by some malady, which has become so deep seated as to be beyond a cure. They were too busy to attend to the slight cough, the pain in the side, or the ulceration which later caused their death from pulmonary tuberculosis, appendicitis or cancer. The sudden collapse of men in the highest places in the business and professional world is a sad and frequent commentary on the necessity of keeping the organism under close observation.

Take the following cases for example: A business man of middle life called for an examination, stating that, though he was in perfect health as he believed, he wanted to know positively if he was in good shape. He stated that the maintenance of perfect health was his greatest capital. Instead of being in perfect health as he thought, he was far from well. His heart was hypertrophied, his arteries were atheromatous, and an examination of his urine showed granular casts and some albumin.

A boy from the high school suffered from headaches following an attack of la grippe. He did not think he was sick, but it was thought best for him to undergo an examination. A chemical examination of the urine showed a high percentage of albumin and a large number of blood corpuscles and casts. The boy was apparently well with the exception of a headache and yet he was suffering from a serious kidney lesion which may always require constant and close observation.

Life insurance examinations reveal a surprisingly large amount of unsuspected disease, but they are made of relatively few individuals. People naturally seek a physician for disordered conditions that are sufficiently obvious to attract their attention. The number of persons who are at present willing to submit to a continuous, systematic observance of their physical condition is small. The individual must be trained to employ his physician to watch his physiologic processes. Every person should possess a record of his physiologic standards and peculiarities for reference, in case of suspected disease.

What excuse have we as a nation to offer for permitting 600,000 persons to die annually of preventable diseases, and over 1,500,000 to be needlessly ill? Public funds are used by the nation to save hogs and cattle from disease. Food adulteration is prevented and the public is protected from epidemic diseases from the outside. Ought not the lives of our citizens to be protected against preventable diseases?

The time is rapidly approaching when physicians will be employed, perhaps by the year, to prevent, or better, to guard the families of their clientele against becoming diseased. Their clientele will be secured on the basis of a reasonable compensation for attendance, having in view the prevention of disease. When this time comes, sickness will be rare. Indeed, Osler says, that, leaving out all contagious diseases and accidents, the great majority of deaths will be from arteriosclerosis.

The practitioner saves lives one by one. He it is who learns the medical history of each patient as carefully as it can be obtained. This information should constitute the beginning of a minute and careful record to be kept by the physician and handed down to his successor. It shall contain the results of careful physical examinations, so that the state of health of each individual shall be known from the earliest possible moment. These examinations should be thorough and exhaustive, repeated at stated intervals and entered upon the record. It would then be impossible for the first manifestation of a chronic disease to show itself by some disastrous explosion. Sudden death from unsuspected heart or kidney disease should be relegated to traditions of the past. This continuous observation of each individual while in apparent health may lead to the early detection of disease.

Has the time come when such advice can be given, when such health inspection of the individual may be recommended by the profession? I believe it has. It is, however, hard for the individual physician to approach the individual citizen with a proposition for continuous care of his health. How can this be done?

First. By law. The inspection shall be compulsory. This, however, will be impossible for many years to come. The individual citizen bristles up and says: "You are interfering with my personal liberties," and that is always where the shoe pinches.

Second. It has been suggested that the state provide free medical examinations for any who may desire them. This plan would enlarge the work of the boards of health, and would require an increased staff of inspectors and medical examiners, but this increased expense would be amply justified by the results obtained. The fact that the state deemed it necessary to conduct such a movement would induce many thousands of our citizens to undergo this examination.

Third. Medical examinations might be required of all children and young people upon entering schools, colleges or seminaries, also of all adults upon entering associations of any or all kinds. The results of such examinations should be returnable to the boards of health and be made a matter of record for future reference.

Fourth. The insurance companies might well afford to advise a free medical examination of all their policy holders at regular stated intervals. The increased longevity which would follow in many instances would lead to the payment of many more annual premiums and thus the increased expense would be easily met. One large insurance company has already put such a plan into action. A medical examination, free of expense, will be given every two years to every policy holder. Health bulletins are issued and policy holders are kept in touch with all progress along lines of health promotion. Even if all life insurance companies should adopt this plan, the work must not be left to them alone, as the vast majority of our citizens are not policy holders, and they must depend upon the state for education as to disease prevention.

Fifth. By education. This probably is the best plan. There never was a time so ripe as the present for the medical profession to urge upon the public the necessity for frequent medical examination of the individual. The magazines fairly teem with health articles by well known medical men. These articles are eagerly read and the advice given is acted upon. One of the most hopeful signs of the times is the interest taken by the public at large in prevention and sanitary measures. Some per cent. of the decrease in the death rate during the past few years may be attributed to this means.

The benefits which would result from such health examinations are obvious. Prof. Jenks, of Cornell, says the loss through sickness in the United States by every member of the population annually is, on the average, about thirteen days and a monetary loss of over one billion of dollars. By proper care, most of this loss could be prevented. While every life has an economic value, it is the humane phase of the question which should appeal most of all to the people. It is the duty of every citizen to do his utmost in creating a sentiment for the encouragement and promotion of laws and appropriations designed to reduce the fearful waste of life now going on all over our country. State boards of health have done and are doing much to prevent sickness, but the movement should be a national one. How to live a healthful life, how to guard against and detect disease would, in the caurse of time, become a matter of common knowledge among the people. A higher standard of life would result and the uplift would be a moral as well as a physical one.

THE SPECIALIST AND GENERAL PRACTITIONER. THEIR WORK AND PROFESSIONAL RELATIONS.*

By Hamilton Weir, PhG., M. E., M. D.,
PORTLAND, OREGON.

This is neither a technical paper nor a scientific discussion. It is intended to be a statement of existing conditions, seemingly capable of improvement, and a plea for more careful methods of professional intercourse and more thorough consideration by both specialist and practitioner of the rights and interests of each, as well as the resulting welfare of the patient.

I would ask, at the start, to be entirely absolved from any intent to preach. In stating the conditions referred to, while sincere in my desire to be fair and well within the facts, I am compelled to rely chiefly on my own observations (extending over twenty-five years of special practice and considerable territory, if not experience) and talks with medical men for both information and opinions.

Owing to the fact that professional conditions and ethical customs vary considerably in the many sections of our own country and that ethics are interpreted in the smaller cities and towns much more generously than in the chief centers of population, my remarks must be general rather than specific, as I am dealing with the subject in its broad sense.

Perhaps a definition of specialist and general practitioner, as understood and considered herein, would better be given at the start to avoid misunderstanding than later. I consider a specialist to mean a graduate of a responsible medical school, a qualified licensed practitioner who has perhaps before, but certainly after graduation, further pursued the study of a certain branch of medicine or surgery, and who limits his practice strictly to that chosen department and refuses or refers to another any and all practice not properly within his limited line. Further, one who refrains from prescribing outside his specialty even for patients under his care, if they are referred to him by a general practitioner, and who refuses under all circumstances, except possibly in emergency or in simple humanity, then without remuneration, calls or demands for general medical or surgical attention.

To this strict interpretation some may object, and it is probable that many who consider themselves specialists and are so accepted by the profession and laity, would fail to fulfil its requirements by a large margin, but I contend that any interpretation less strict would be unjust to the general practitioner and that its honest fulfillment is necessary to proper professional conduct, to the rights of both specialist and practitioner and their attitude and service to the public.

Any practitioner may and generally does have his preferences, his special abilities, even his dislikes of certain branches of practice, but as long as he answers calls for professional assistance and receives pay for services rendered—or hopes to some time—he must be considered a general practitioner, though he prays for more surgical work and swears—softly, of course—when called to obstetrical cases at 3 a. m., and whether he practices East, West, North or South, in city, town or country village.

The specialist is obviously found in the larger cities or more populous districts, but his relations to the country practitioner, whose patients he treats (and whose patience he sometimes tries) are, or should be, the same as to his city brother and entitled to the same consideration. However, the increasing tendency to specialize has resulted in few cities of 10,000 inhabitants being without capable specialists, at least in eye, ear, nose or throat practice, and it is also true that the size of the city is no criterion of their ability any more than it is of the skill and knowledge of the regular practitioner, for many able men in our profession are found in the smaller cities and even in sparsely settled districts.

The field of medical research with its almost unlimited possibilities is too vast to be swallowed entire. We know little enough of any part to acquire and retain the whole and especially to retain what we acquire, for medical experience is not a repitition of exact application of knowledge gained. No two patients are alike nor are the symptoms caused by the same disease in each identical, and because we successfully combat them in one is no proof that we will be equally fortunate in the other, though similar treatment and attention be given. A carpenter, detail work as performed by the ironworker, the mawhose training enables him to build one house properly, can always duplicate his work without additional knowledge, but the doctor must study each case, though the disease be identical, which makes medical experience as much the acquirement of knowledge as the application of it.

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*Read before Portland City and County Medical Society, Portland, Ore.

As we progress in medical knowledge we narrow our field of search and effort; we become more exact; we determine the fundamental causes and thereby are enabled to apply the cure when found with more certainty. No one will deny that specializing, specific and thorough research in limited lines has accomplished more in real medical progress and definite results than centuries of the general application of accepted theories could possibly do. Germ disease, aseptic surgery, toxins, antitoxins and so on were the result of specific research in limited fields and the busy doctor, with a large practice, might go on forever applying what he knew and profiting by his experience without making much progress of genuine importance.

While the practice of general medicine is the study of it, the knowledge and experience gained thereby consist of the multitudinous forms and aspects of the same disease in different patients, rather than the study of its fundamental causes and the methods of its scientific prevention and cure. I use the word scientific here advisedly, with the intent to distinguish between the method of studying the cause by isolation and culture of the germ and discovery of its antitoxin and the method of treating the symptoms as they occur during the course of the disease, resulting from its presence in the system, by means of drugs more or less efficacious in controlling them. Too frequently,I might say too habitually, we prescribe for symptoms, and in most cases such prescribing suffices, as the bulk of office practice consists of ailments due to slight transgressions of the laws of hygiene and prove responsive to intelligent advice and corrective treatment. It is very easy, too easy perhaps, to drop into treatment ruts in our journey along the road of medical practice. In daily contact with similar diseases with similar symptoms in similar people of similar habits we find ourselves prescribing a similar routine of treatment.

This does not imply that general practice is wrong or the practitioner inefficient. It means that the distinction between him and the specialist should be plain and understood, that they should work together and without friction. I believe that the more they do so, the better for themselves, their results and their patients.

The practitioner's general knowledge and comprehensive observation is as necessary as the specialist's more specific and limited training. He is like the architect upon whose knowledge supervision of the mason, carpenter, plumber, plasterer and painter, the success of the building depends. He is the caretaker of his patient's health and should be the judge and as such decide for his patient's best interests, when the services of a specialist are necessary to perfect his own. Not many years ago the doctor was also the druggist and still is in many localities, and some of his concoctions would make a chemist choke with envy—or mirth. His better knowledge of drugs today is a prescribing, not a compounding one, and the prescription or manufacturing chemist is an aid and not a competitor.

Too often a specialist seems, and in some instances wrongfully is, a competitor when he should from every viewpoint be an aid and coworker. Too often, however, the patient instead of the practitioner is compelled to judge as to the advisability or necessity of consulting a specialist, although I admit that reason sometimes exists for hesitancy on the part of the practitioner, because too often he loses his patient when he refers him to a specialist, or if he doesn't lose the patient, he forfeits control of the case and participation in the treatment. This is wrong, fundamentally and professionally, but also unnecessarily if the plain duty and the rights of each are properly considered.

When referring his case to a specialist, the practitioner should state his reasons for doing it to the patient as well as to the specialist, and when he deems it advisable, as it generally is, he should insist upon receiving a written report of the findings. By so doing, the practitioner retains control of the case until he relinquishes it voluntarily for some cause, such as local treatment of the organ affected. But even then, with a proper understanding, such relinquishment would be temporary and the patient would consider himself under the general care and direction of his physician and would report to him, if necessity arose, because he would then believe his doctor both interested and well informed in his case.

It is not impossible, of course, to find patients who will misinterpret his motive and question the need when their physician advises consulting a specialist and who attribute the advice to a desire to get more money out of them, even believing that an arrangement exists for a division of fees, especially fees for operative treatment. Unfortunately there is some jutification for such a suspicion, as examples of a division of fees under similar circumstances do exist, or let us say, have existed, bad as the practice is. Medical societies should investigate such instances of unprofessional conduct, and if found true, punish the participants in the most severe manner possible, without fear or favor.

The medical profession is not entirely free from mercenary, even dishonest members, men who will permit financial considerations to outweigh all others, who smother the weak voice of conscience and take advantage of the trust reposed in them because the risk of discovery is slight and punishment seldom severe if administered at all. A medical society cannot be a court of justice in a strict legal sense, of course, but its power is great in upholding the standard of ethical practice and controlling the professional morals of its members. The effect of its mandates on public opinion is equally pronounced and its power should be exercised more frequently than it is.

Again, it is possible that some patients may unjustly attribute their physician's desire for a specialist's report to ignorance on his part, of conditions he should more thoroughly understand, at least in their opinion. However, a simple statement of his reasons and a few words of explanation showing the desirability of such a report in establishing a definite diagnosis, either by elimination or confirmation of possible influences, will do much to prevent a wrong conception of motives and go far toward satisfying the patient then and thereafter. I believe that, if necessary, the most intractable ones could be easily won over by a tactful appeal to their intelligent appreciation of the difficulties of their case and the need for definite information of a technical character, no general practitioner should feel at all ashamed of his inability to give.

We are all ready to believe our pains the most severe, our ailments the rarest, the most difficult and the most interesting. But for that prevalent trait in human nature the quacks and medical charlatans would find poor pastures and thin picking. We have all seen instances of patients feeling and plainly showing pride over the complicated character of their especial cases, and the confusing symptoms they offered. We have even heard them brag about the many failures to diagnose them, while they exhibited a certain satisfaction in telling of the money expended in futile efforts to obtain relief.

It is the dishonest doctor who plays upon and profits by such vanity, but the trait mentioned is so frequently met with among educated people that an honest effort to aid will seldom suffer through too much attention being given any patient of average intelligence.

It is true, strangely true, that many physicians are chary of speech and seemingly averse to explanations of conditions which are of vital interest to their patients. I have heard many times such remarks as "Why, my doctor wouldn't say just what the trouble was," or "He gave me a prescription to get filled and told me to come to you if I didn't get better." I may be hypercritical, but I think any physician should expect dissatisfaction to result from such instructions and not be surprised if his patient took him literally and gave the specialist both the credit and the money for any relief obtainable. Further, it would hardly be strange if the patient's opinion of his physician's qualifications was lowered thereby, in spite of sincere efforts on the part of the specialist to prevent, with the ultimate result of the specialist being blamed for the patient's defection and loss of confidence. There seems little excuse for such poor judgment unless the practitioner desired to get rid of a troublesome, non-paying patient, in which event his method would prove as efficacious as his motive would be reprehensible.

The specialist is naturally a faddist and rides his hobby. He is prejudiced and short sighted surgically, for his field of view has long been limited. But the more it is limited, the keener, the quicker, the more certain within those limits. The general practitioner, by reason of the very generality of his work, the comprehensive character of his view and the necessity for considering the many causes, is less liable if not less able to thoroughly consider the few.

Every oculist has heard patients say, "My doctor said these headaches might come from my eyese, but he treated me for everything else before he sent me to you to have them examined," or "Doctor, why didn't the regular physicians discover this in my nose? I have suffered for years with this neuralgia and always told them it seemed to start from my nose and run up through my head." The physicians were doubtless capable men. In fact, in a similar case I have in mind, I know several were men of great reputations and proved ability, but they were not specialists. Everything did not revolve "on the nose" with them and they were compelled to consider all the other possible and perhaps more probable causes. Therefore, when the nasal speculum revealed an ulcerated condition of the superior turbinate, which exposed a branch of the nasal division of the fifth cranial nerve, the diagnosis and cause of the pain were instantaneous, while the cautery gave quick and permanent relief. Could the physicians be blamed for failing to as quickly find the cause? No, unless for delay in having a nasal examination made. Many patients have left my office as pleased and satisfied with a negative finding as a positive diagnosis of their ailment could have given and I have no reason to suppose my experience exceptional or that specialists in other lines could not as readily make a similar statement.

To recapitulate, my plea is for closer association of practitioner and specialist, for more frequent consultation, for increased confidence and exchange of professional courtesies, for more consideration of the rights and limitations of each, for full written reports and greater attention to the diagnosis, the value and necessity of such reports, for especial consideration of the rights of the practitioner who refers his patient to the specialist, but does not release or discharge him by so doing, for more specific information from the practitioner regarding the man as well as regarding the medical aspects of the patient he refers, for unity in treatment as well as generosity of service, and, last, but not least, combined effort to protect each from the man who will not pay his bills.

SOME CLINICAL FACTS ABOUT ULCER OF THE STOMACH.*

By Geo. F. Koehler, M. D.,
PORTLAND, ORE.
Lecturer on Diseases of Stomach, Med. Dept., University of Oregon.

From whatever view-point we study peptic ulcer, we are compelled to admit that, clinically, the diagnosis, the duration and the prospect of the healing of an ulcer of the stomach, are very uncertain. When it comes to the prognosis we are always in doubt and just what we are to tell our ulcer patients regarding their future is very often a problem of great perplexity. Inasmuch as this is one of the most common of all lesions giving rise to chronic dyspepsia, it is interesting to ask: What is the etiology of gastric ulcer, and what is its pathologic picture? While such questions are timely and important it does not fall within the scope of this paper to discuss them. At this particular time I wish merely to review a few aspects of the subject that seem at the moment to be of special clinical interest.

In order to serve my purpose best we will pass up acute ulcer of the stomach with only a few remarks on the treatment, for, comparatively speaking, acute ulcer is a very simple affair, usually healing spontaneously without medical or surgical attention. After making the diagnosis I put the patient to bed with the understanding that it is absolutely necessary to remain prone for a period of two or three weeks. When the existing condition and the object to be attained by complete rest is explained to the patient, there is, as a rule, little difficulty experienced in carrying out this plan of treatment.

The next most important factor for consideration is the diet, as it is the food that continuously aggravates the condition. The diet of choice is naturally the one that causes the least irritation of the inflamed mucosa. I usually employ the Lenhartz diet of raw eggs. The eggs are beaten up whole and placed in a cup or glass surrounded by ice. Small amounts of milk are also served cold, the eggs and milk feedings alternate every two hours. At first two teaspoonfuls of the egg and four of the milk are given. First day two eggs and six ounces of milk are used, gradually increasing the amount until the sixth day, when six eggs and twenty ounces of milk are taken; at end of the week the eggs are reduced, and scraped meat and boiled rice are added. Second week, the eggs are soft boiled and minced chicken is added. If there has been a recent hemorrhage, I give nothing by the mouth, feeding exclusively per rectum.

In the use of drugs I have little confidence. In young anemic women, where there has been bleeding, I am in the habit of prescribing tr. ferric chlorid in a gelatin disk. This preparation seems to fulfill the double purpose of a styptic and hemoglobin builder. After three or four weeks of this treatment if the patient does not normally convalesce, I become discouraged and soon begin to feel the necessity of calling a surgeon in consultation. I believe in studying these latent ulcer cases. There should be co-operation between the surgeon and the internist, and I believe also that the surgeon should be called to see the case early. In this way the patient can be carefully watched from both sides and it is quite evident that by so doing a more satisfactory conclusion can be reached as to the exact time to operate, and the kind of operation to be done. As soon as I recognize the fact, then, that the case is likely to become a surgical one, I feel it my duty to invite surgical consultation and not wait until the time to operate.

The clinical picture of chronic gastric ulcer is subject to many variations. The most common symptom is pain which generally comes on soon after the ingestion of food. It is localized and goes through to the back. In many cases you will find a distinct point of tenderness over the epigastrium and very often at the left of the twelfth dorsal vertebra. This so-called dorsal pain is of much clinical significance. Vomiting is often present but by no means is it characteristic; when present it occurs in from one to three hours after a meal and is followed by relief. Hematemesis is probably present in about twenty per cent. of the cases, while occult blood can be detected in the stomach contents and stool in nearly fifty per cent., although several examinations may be necessary as the bleeding is not constant.

The medical man especially should be on the lookout for latent or concealed hemorrhage. This valuable aid to surgical diagnosis is often passed up, owing perhaps to a repugnance on the part of the physician to the handling of the feces. In the last few years several cases have come under my observation in which this valuable aid to diagnosis had been totally overlooked. I reported a case of this kind recently in Northwest Medicine. A carcinoma of the stomach in a young woman that had been treated for a period of two years as a case of nervous vomiting. The continued presence of occult blood in the feces and gastric contents led me to diagnose the case as one of carcinoma of the stomach, which was confirmed by operation. Recently, again, I advised operation in a case where the patient complained of diffuse pains in the abdomen, there being no other symptoms, but the feces constantly contained occult blood. Operation revealed a cancer of the sigmoid. Tests for occult blood can help us to make the diagnosis relatively early, and sometimes render operative interference possible soon enough at least to prolong life. In every case of suspected ulcer the feces should be carefully examined after thirty-six hours of a meat free diet, and in half of your ulcer cases, if you examine for occult blood, you will find it.

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*Read before the Portland City and County Medical Society, Portland, Ore., Feb. 15, 1911.

Examinations of the gastric contents may show the acidity to be normal or even diminished but usually it is increased. I think, however, we are prone to rely too much upon hyperacidity as an important clinical sign. Therefore I will mention the fact that Ewald reports over one hundred cases of chronic ulcer in which he found an excess of hydrochloric acid in only thirty-five per cent. Howard discovered hyperchlorhydria in but seventeen per cent. of fifty-four cases examined and a subacidity in twenty-five per cent. Other investigators mention many cases that had normal acidity.

No single symptom is sufficient in itself to establish the diagnosis, and we are obliged to fall back upon a symptom complex. Dyspeptic symptoms, even if they appear definite enough, cannot be trusted as evidence of ulceration, although, if such symptoms continue in spite of treatment, it is possible that the trouble is due to the presence of a chronic ulcer or to scars left by a healed and unsuspected ulcer. So it comes down to this, that, as a whole, the results of diagnosis and treatment in many chronic ulcer cases are unsatisfactory and misleading. The after-history of chronic ulcer cases is difficult to trace and the end results of medical treatment from a statistical standpoint are unsatisfactory.

Men like Greenough and Joslin note the interesting fact that in many cases of chronic ulcer, medical treatment is of little value, and they conclude that every other patient with gastric ulcer is either to have a recurrence of symptoms or is never to be well again. It is quite probable, at any rate, that a majority of these latent cases drift along year after year chronic invalids, and finally many of them come to the operating table too late to be benefitted. Consequently it becomes the duty of every practising physician to familiarize himself with every possible detail that will assist in the early recognition of gastric ulcer and when, either from a process of hypertrophy or by the presence of scar tissue, the outlet of the stomach becomes occluded he should recognize the fact early that surgery is demanded.

This argument leads up to a subject of very great clinical interest, the relationship between ulcer and cancer. In looking over the statistics one finds that, from a surgical standpoint, carcinoma of the stomach is very frequently associated with gastric ulcer Some surgeons tell us that about fifty per cent. of the resections for cancer showed origin in an ulcer, and quite as large a percentage of the resections for ulcer showed cancerous changes. In a recent article by Dr. Wm. Mayo, he says, "prophylaxis of gastric cancer can be aided by excision of calloused ulcers of the stomach. In the 266 cases in which we have performed resection, Wilson and McCarthy examined histologically 218, and we are able to show that eleven per cent. of the cancers had their origin in chronic ulcer." This is certainly interesting and points the way to a more definite and radical method of treatment, and we can look forward with some degree of satisfaction to the great possibilities of modern surgery, aided by modern methods of diagnosis, and it is possible that by timely surgery cancer, the most terrible of human diseases, could be prevented in a large percentage of cases by removing ulcer, the initial source of irritation.

The age of the patient, the situation of the ulcer, and its effects on the motor function of the stomach have much to do with the prognosis and treatment. After the healing process is complete the resulting scar may occlude the pylorus. Thus the condition becomes at once surgical and it would be foolish to treat the case for any length of time by means of lavage or medicines. A fast line can be drawn here between the medical and surgical treatment of ulcer of the stomach, and I think even in those cases where the obstruction is only partial, or where the ulcer shows but little tendency to heal after proper medical treatment carried on for a reasonable length of time the case is operative. I would not recommend prolonged medical treatment. Stomach drainage is proper; it puts the ulcer at rest, promotes the healing process and will render improbable a recurrence of ulcer or a transition into cancer. Would it not be better to operate too early than to permit the patient to pass beyond all possible surgical help? Operations performed too early are so rare that one never hears of them. The lesson is a very plain one. Operate in time if you wish to do all in your power to save the patient.

Cancer, like peptic ulcer, sometimes runs a latent course, and any sign or symptom which can throw light upon the doubtful cases is important. The medical profession is searching for some pathognomonic sign of cancer; yet, when it comes to the early diagnosis of cancer of the stomach, we are all helpless. There are certain cases in which we cannot differentiate between chronic ulcer and carcinoma. The diagnosis in these uncertain cases must be made by the surgeon on the operating table. Unfortunately when the clinical picture is indelibly stamped the prognosis is always grave. While I do not believe we should resort to exploratory laparotomy without first carefully studying our patients and availing ourselves of every possible means of special methods of diagnosis, I cannot but help feel that chronic gastric disorders should be subject to surgical consideration more frequently. In the hands of a competent surgeon early exploratory operation is not only the proper precedure in doubtful cases, but is safe and will in time to come result in saving human life much more frequently by enabling the diagnosis to be made early, than can possibly be achieved by any laboratory findings.

If chronic ulcer were a simple affair, confined to a localized area in the gastric mucosa, if detected, it could be cured easily, but commonly it is a most complicated condition and its transition into cancer takes place insidiously, without any special signs of warning. At one time it was thought the absence of free hydrochloric acid in the gastric contents was a positive indication of cancer of the stomach. We now know this particular sign is of little value. Later on the presence of lactic acid, together with the Oppler-Boas bacilli in the stomach contents after a milk free diet, was thought positive evidence of carcinoma. While this is an important sign it is by no means pathognomonic. More recently X-ray examinations have furnished, in a number of cases of ulcer and cancer, interesting findings and doubtless perfection in technic will give the X-ray increasing value in the diagnosis of these conditions.

One of the most important clinical signs of ulcer and cancer is chronic stasis. Its absence has no bearing on the question of their existence, except that it is an argument against the presence of either of these legions involving the outlet of the stomach. It is a fact, however, that the commonest cause of insufficient drainage is obstruction of the pylorus. When we find stasis we think of ulcer or cancer, although it must be remarked that its presence is not pathognomonic of the lesions in question. In stasis due merely to atony the symptoms usually disappear soon after the regulation of the diet, with a few washings of the stomach, and thus we can often differentiate between this and a stenosis of the pylorus. But it is well enough to remember that even a stenosis can quite frequently be improved by palliative measures, so that temporary relief is afforded.

The stomach function, as you know, is most commonly determined by the examination of so-called test meals. The motility meal, for example, is removed in from eight to fourteen hours, and we ascertain the presence of stasis by the recognition of food at a time when the stomach should be empty, and by the presence of undue fermentation in the fasting stomach contents. It can always be recognized when it exists by the presence of food elements or signs of fermentation fourteen hours after the ingestion of food. As the usual time of the stomach for emptying itself after a full meal is seven hours, this fourteen-hour period is long enough between the normal limit to allow of variations. I usually instruct the patient to take for his supper the night preceding the examination, besides a little meat, bread and soup, some rice containing a dozen or more raisins, as the later are easily recognized, and as a rule are retained in the stomach when the pylorus is stenosed.

The subjective symptoms of stasis are mainly caused by the long retention of food in the stomach. It is not an uncommon thing to find that such a patient has had "spells of distress" sometimes after taking food, sometimes relieved by the ingestion of food. They have had perhaps eructations and belching of bad smelling gas, occasionally vomiting of food or a watery sour fluid, generally with pain preceding the vomiting and an almost uncontrollable thirst. Of even greater importance are the results of the objective examination. When we examine such a patient we will find a fairly characteristic condition. He is usually pale, somewhat emaciated; the belly is nearly everywhere tympanitic. Shake it, and you will probably elicit a distinct splashing sound. You will often be able to see a feeble perstaltic movement as the stomach attempts vainly to empty itself. This is a pretty good sign of pyloric stenosis, and one which very rarely occurs as a neurosis. In two cases of stenosis due to chronic ulcer that have come under my observation I was able to make a correct diagnosis on the presence of this clinical sign alone. If it be possible by means of palpation to map out the pylorus as a smooth oval tumor and if stasis be present, we can make a diagnosis of pyloric obstruction with a considerable degree of certainty.

The age of the patient as an aid to diagnosis of cancer of the stomach is of little value, and does not help us much. We are beginning to appreciate the fact that it is found far more frequently below middle age than we had previously supposed.

In conclusion, the diagnosis of probable malignancy demands exploratory operation without temporizing by the use of drugs. Acute gastric ulcer is to be operated upon when perforation has occurred or for the arrest of alarming hemorrhage. In chronic ulcer repeated small hemorrhages may demand operation; so may adhesions causing anatomic changes or where the symptoms continue after proper medical treatment. If the natural drainage of the stomach is interfered with, operation is advisable. Pyloric stenosis demands operation, as does hour-glass stomach, as well as benign and malignant growths.

I think, in a general way, we all agree that the acute ulcer cases belong to the internist, while the chronic cases that do not get well under proper treatment demand surgery. Our views from a medical and surgical standpoint may differ, and it is fitting that we exchange them in the hope that a comparison of the results of medical and surgical treatment in our own personal experiences will result in reaching more satisfactory conclusions.

CEREBRAL PALSIES OF CHILDHOOD. IMPORTANCE OF EARLY DIAGNOSIS.*

By Robert P. Smith, M. D.,
SEATTLE, WASH.

Infantile and fetal palsies, although dependent upon various causes, arise in a manner so similar and produce results so uniform, that they may sometimes be considered together under a common title. It is chiefly the palsies ocurring at birth or during the first few years of life, however, that I shall deal with in this paper, with an attempt to impress upon the general practitioner the utmost importance and serious responsibility resting upon him requiring an early diagnosis in all such cases.

Whatever may be the primary nature and extent of the lesion, it affects the brain at a special and delicate phase of development to which there is nothing comparable in adult life. In the infantile brain many of the nerve fibres are not yet myelinated, and comparatively few of the nerve cells have reached structural perfection. Moreover, cells and fibres interrupted in their process of formation by an acute disease or traumatism may not again be placed under suitable conditions, and may not even have the necessary space to expand further in those collateral ramifications that would have developed under ordinary circumstances. In adults the power of the neuroglia to proliferate has become more or less dormant, and is only aroused by pathologic processes and then very moderately; whereas, in the young and vigorous neuroglia in its full activity, the normal work of growth is going on and consequently reactive proliferation is excited to an extreme degree.

The organic diseases of the brain that occur in early life, therefore, merit a place by themselves, both because apart from the initial lesion they interfere with the development of intact and more or less distant regions of the nervous system, and because they stimulate the neuroglia in their neighborhood to undue proliferation. All palsies of childhood lead to a certain and often serious loss of the active and prominent functions among which is often to be included that of intelligence. In some instances the areas of cicatricial tissue are the starting point of irritative stimuli, which may become active from time to time, although they may gradually cease. It is to be added that the intellectual territories, being the last to be formed, preserve for a longer time those infantile structural characters that cause cerebral palsies occurring in the early years of life to have specially grave consequences.

We should not, therefore, be surprised that motor and sensory paralysis without defect in intelligence are somewhat rare in the palsies of childhood, and that, on the other hand, those cases of simple idiocy, to which Freud gave the name "cerebrophegia without paralysis," are much more common. However, it is true that the majority of the cases seen show both mental impairment and disturbance of the motor functions as well. Between imbecile by inheritance and idiots by accident of circumstances, there comes to be a dualism not until recently recognized in psychiatry. Hitherto alienists have seen in palsies of childhood only the essential results, that is to say, the arrest of development, and as a cause of the arrest they have not been able to recognize any other factors than hereditary degeneration.

The brain palsies of childhood show themselves in the form of (1) hemiplegias; (2) diplegias or double hemiplegias, in which both sides of the body are involved; and (3) paraplegias, in which the lower limbs are chiefly or entirely involved.

In these palsies (as in the same troubles of adult life) the loss of motor-power is always accompanied by a rigidity, and by some contractions and exaggerations of reflexes which in these respects distinguish them from paralysis of spinal origin. The seat of the lesion in cerebral palsies is in the hemispheres of the brain, and it is the central motor neurons which are involved; that is to say, that part of the direct motor tract which extends from the brain cortex down to the spinal cord as far as the anterior horns. Brain palsies of childhood are, therefore, disorders of the cortico-spinal neurons,—while the spinal palsies of children are disorders of the neuro-spinal neurons. The site of the initial lesion in these cases is almost always connected with the blood vessels, whether it take place at or after birth, whether its origin be mechanical, inflammatory or infective, and lastly whether it be a case of focal and gross lesion, or of microscopic and diffuse lesions.

When an infant's head is damaged by a serious trauma, the nervous elements of the cerebral cortex may suffer direct injury, but even in these cases much of the damage is caused by effused blood which compresses or infiltrates the cortex. The symptoms most common at the occurrence of these cases are a convulsion which is seen in about one-fourth of the patients—which may be unilateral—but usually is general in character. The duration may be short or last for several hours. At the same time a febrile process develops which continues for several days. After the acute symptoms subside, the child is usually found to be paralyzed on one side, the paralysis involving the arm, leg and face as in adult hemiplegia or, maybe, involving both sides. The paralysis may undergo improvement in a short time, and it will be found the paralyzed side fails to grow as fast as the other, and there will be from one-half to an inch or two shortening in the arm or leg. The circumference of the limbs are different, the surface colder and vasmotor disturbances present. As the case progresses a rigidity of the affected limb develops, the heel is drawn up so there is talipes equinovarus or equino-valgus. The flexors of the forearm, wrist and fingers contract as do the adductors of the thigh, exaggeration of reflexes and clonus-athletoid, choreic and ataxic movements. In the disordered limb the peculiar mobile spasm develops. Along with these symptoms it is noticed a disturbance in the mental condition of the child. It is at least backward in development, consisting of a slowness in learning to talk and walk, and in a small proportion of cases a decided aphasia. The hemiplegia occurs more frequently on the right than on the left side. Stigmata of degeneration will soon be noticed, such as a microcephalic skull, cranial and facial asymmetry, imperfectly developed teeth and a high palatal arch. Fisher and Peterson both report having found a slight flattening of the skull on the side of the lesion.

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*Read before King County Medical Society, Seattle, Wash., May 1, 1911.

The primary changes that lead to the cerebral palsies of children are: (1) Lack of brain development producing localized atrophy of the cerebrum and the condition known as porencephalus (true porencephalus is a condition in which, owing to congenital defect in nutrition a cavity or depression exists in the lateral ventricle); (2) hemorrhage, which is probably the most frequent single cause; (3) embolism; (4) thrombosis; (5) meningo-encephalitis, or perhaps polio-encephaltis; (6) a diffuse corticle sclerosis.

The first three causes are undoubtedly the most frequent. The probability is that in hemiplegias the original lesion is generally a central hemorrhage, less often meningeal hemorrhage. In diplegias of children the cause is usually a meningeal hemorrhage due to injury or some disturbance occurring at birth. Palsies occurring in the first, second or third years of life are usually due to hemorrhage, as are also those developing after infectious diseases.

As to prognosis the hemiplegics often reach adult life and frequently may become useful citizens, whereas, with the diplegics and paraplegics the duration of life is usually much shorter. When we consider the great tendency to mental defect that occurs in cerebral palsies, it becomes essentially necessary that a most thorough and careful diagnosis should be made early as to the exact nature of the trouble. The time has passed when the physician, finding such a palsy existing, can or should be content to practically consign the little patient to the waste basket by the do-nothing treatment, leaving the case to become a burden either to the family or to the state. We should carefully make the diagnosis, whether it be cerebral or spinal palsy, and, being positive of it, begin early the proper treatment either to benefit or cure the patient.

Electrical treatment will stimulate the nutrition and functions of the muscles. Massage and stretching of contracting tendons and limbs will also be helpful. The orthopedic surgeon will also render valuable assistance by overstretching contracting limbs and placing them in splints. Special attention should be given to the child's intellect, and instructions given to such by those skilled in teaching the feeble minded. All this should be done early, anticipating mental deterioration before it really occurs, and stimulating the brain centers in order to prevent an inert or atrophied condition. Gymnastic exercises and the best hygienic conditions possible should be persistently used for a long duration. In other words, the proper training of the body and careful education of the mind should be the fundamental principles of our treatment. Of late, surgical treatment has been tried with apparent success in a few cases, by trephining the skull or by Sannelongue's operation of craniectomy. If the case be one of hemiplegia, the surgeon should at least make an exploratory opening. If he find evidences of compression from the presence of a cyst, this may be cautiously opened. If there be microphelus, the lineal craniectomy is indicated and, in all cases of operation on children, it has been found best to make it as short as possible consistent with conditions found, and that little be done at any single operation.

I am also of the opinion that the oculist should be called to examine for ocular disturbances, as Kissling reports paralysis of the external ocular muscles in hemiplegia, and strabismus common in diplegias—most commonly convergent. In some cases unilateral or bilateral rigidity of pupil to light have also been found. Ossipow explains it as being the result of some lesion in the nucleus of the motoroculi nerve. Muratow states nystagmus frequently occurs in diplegias, which he believes due to hemorrhage in the nuclei of the third nerve. Optic atrophy is a complication common to all forms of cerebral palsies.

With all these facts before us today to assist us in a thorough diagnosis, and with the organization of suitable institutions which provide agreeable surroundings for the probable defective, in which teachers may be secured who from long experience are skilled in instructing such cases, is it not an urgent and grave responsibility upon the physician to make an early diagnosis of such cases, in order that proper facilities may be secured at the earliest possible moment, before serious and irreparable damage to the young brain has become effective?

NORTHWEST MEDICINE
The Journal of the State Medical Associations of Oregon, Washington, Idaho and Utah.
Devoted to the Interests of the Medical Profession of the Pacific Northwest.
Editorial Office, 719-22 Cobb Building, Seattle, Wash.
SEPTEMBER, 1911.

EDITORIAL

MADAM CURIE.

History has seldom disclosed instances of the female sex venturing into the fields of science so successfully as to gain world-wide recognition and reputation. This field of work has been traditionally regarded as man's exclusive preserve. Poland, however, produced the exception when Marie Skladowska—susequently Madame Curie—was born. The world has witnessed recently what might be termed the mockery of French gallantry when the Paris Academy of Sciences persistently refused to elect her to membership because she was a woman.

Madame Curie, as is generally well known, was born in great poverty and became the assistant of her distinguished father in scientific research. Subsequently she became the wife, copartner and fellow worker of an extremely modest but earnest and industrious chemist. Through their persistent efforts radium was discovered and the world dumbfounded. Honors were heaped upon them. Royalty visited them, Great Britain finally succeeding in getting them in her territory. They were welcomed by the greatest electric scientist of our times, Lord Kelvin. The arcanum of French learning—the Sorbonne—made her a lecturer. Then, at the zenith of such a career of honor, disaster came. Her husband was run over and killed. She became a lone woman in a large metropolis. Now, what did she do? This plain little woman, who had early learned the life of the Latin Quarter and lived on ten cents a day, simply went on with her work in chemistry where her husband had left it and commanded the attention and admiration of the whole scientific world.

The curious part of the narrative is this. Despite her tremendous industry, her great learning and her chemical discoveries of which the world of science had taken cognizance and applauded, the Paris Academy of Sciences refused to elect her as a member of its august body because she was a woman. So far as is known there was no by-law of that organization which made election impossible. It was simply an expression of opinion of a body of distinguished men that, no matter how successfully a woman might venture into science, she could not be honored in the way that France honors its most distinguished scientific workers of the opposite sex. According to Laura Crozier, in *Popular Electricity*, she is a person of little consequence in her adopted land. From the same writer one reads these pathetic lines: "Here at night she folds her hands that have dared to search out the components of the sun, and bends the mind that has opened new avenues to medicine to telling the hero-tales of far away Poland to her little girls. In the warmth of their arms she finds strength and courage to go on for another day." We are confident that she has the best wishes of every medical man and woman of the American continent. C. A. V.

VISCERAL PTOSIS. ITS FAR-REACHING EFFECTS.

Ever since Morgagni first described visceral ptosis and Glenard popularized the disease, there has been an ever increasing amount of work and writing concerning it. The theories as to its etiology have been legion. We are still somewhat in the dark concerning various details as to its causation but this much we do know. We know the general signs which betoken its existence. We know that there is an individual conformation favoring it. We know that this is congenital and consists in the configuration of the chest and abdomen. The chest is narrow and long, the ribs extend down well to the crest of the ilium. While standing, the patient is not erect but the shoulders are drooping, the scapulae projecting, the epigastrium flat or retracted, the abdominal aorta visibly pulsating, and the belly long, boat-shaped and protruding below the navel. In addition, the right kidney (and sometimes both) is prolapsed in most cases. Certain other factors predispose. Thus, the cervical fascia is the chief support of the diaphragm in the erect position. In the stooping position the diaphragm is lowered and the abdominal muscles relax. From the diaphragm are suspended the liver, stomach and colon and with the descent of the diaphragm and relaxation of the abdominal muscles ptosis of these organs occurs. Recently it has been shown by Dwight that in one out of every five persons an embryonic state may persist and the ascending and descending colon have a free mesentery so that the whole colon may prolapse into the pelvis. In visceral prolapse it has long been known that the transverse colon may descend in a V. being held up at the hepatic and splenic flexures. We now know from explorations and bismuth x-ray plates that either the ascending or descending colon, or both, may descend as well and the whole colon lie crumbled and kinked in the pelvis. More often the ascending and transverse colon fall and there is kinking and obstruction at the splenic flexure.

The results of visceral ptosis can hardly be stated they are so varied. Pressure of the sagging stomach on the third part of the duodenum crossing the spine may lead to obstruction, dilatation of the stomach and frequent attacks of bilious vomiting. This is seen often in children. The small intestine sags with the stomach and becomes variously kinked, causing partial obstruction and colics. Pressure on the pancreas by the stomach interferes with its nutrition and secretion. The sagging and stretching of the stomach and bowels lead to atony and lessened circulation and secretion. In the colon the kinking gives rise to obstruction and constipation and thus in its turn favors numerous forms of toxemia. While neurasthenia and various digestive disturbances have long been associated with visceral ptosis, some recent developments have proved startling in their significance. Thus, among the diseases originating from the toxemia of enteroptosis, the various forms of arthritis, infectious, atrophic, hypertrophic and deforming are the most frequent. Goldthwaite by a careful study concludes that visceral ptosis is the chief source of these conditions. Inflammations of serous membranes, as pleurisy and endocarditis, not infrequently are associated with enteroptosis and probably result directly from it. Also iritis and cataract appear sometimes to have a causative relation with visceral sagging. Appendicitis is so frequently seen in enteroptosis that it not improbably follows interference with the circulation of the appendix. Graves' disease has been observed so often in persons suffering from visceral prolapse that an etiologic relation is suspected. It has been suggested that arteriosclerosis is not an unlikely sequel of the intestinal toxemia in visceral ptosis. Mucous colitis is apparently another concomitant of the visceral sagging. It will be seen that these results are so many and so numerous that a description of its symptomatology would be an impossible task. Beginning with attacks of coated tongue, bad breath and vomiting in the young child the symptoms run the whole gamut of that protean group known as indigestion, and possibly of some of the sequels already noted. In tracing the sequence of events in enteroptosis, beginning with the apparently simple sagging of the viscera and ending perhaps in a general arthritis, endocarditis and pleurisy, we are forcibly reminded of that classic, "The House That Jack Built." The opening line, "This is the house that Jack built," not preparing us for the ever-increasing complications which finally terminate in that unique concatenation of events sacred to childhood.

The chief object of this discussion is to emphasize the far-reaching and serious results that may be attributed to visceral ptosis and to urge the practitioner to always keep the thought of it in the back of his mind, in obscure and difficult cases. The more common organic abdominal diseases can be so closely simulated by enteroptosis that it is always worth while to try abdominal support in suitable cases before resorting to surgery. We would advise our readers to consult Mumford's "One Hundred Surgical Problems" for an account of many such cases. X-ray plates after a bismuth meal prove the most reliable test. In respect to treatment there is not much that is new. Braces and exercises in the young to correct the faulty posture, rest and feeding to increase the formation of fat, and abdominal support are most often applicable. In the conditions where a crumpled and kinked state of the prolapsed colon leads to severe constipation and toxemia, surgery has proven of value and includes appendicostomy and flushing, or exclusion of the colon, or colectomy.

K. W.

THE MEETING OF THE IDAHO ASSOCIATION.

The annual meeting of the Idaho state medical association will be held at Boise, October 11 to 13. This meeting will be held at the same time as the annual fair at Boise, so that physicians in attendance will be able to take advantage of the reduced railroad rates which will be in effect at that time. Dr. McCormack, of Kentucky, the well known representative of the American Medical Association, will be present at this meeting. Arrangements will also be made for another meeting at Lewiston to take advantage of his presence, that the beneficial effect of his words may be extended as widely as possible in this state. The Idaho association extends a cordial invitation to physicians of Oregon and Washington to attend this meeting, assuring them an interesting and profitable experience.

E. E. M.

THE SEPTEMBER MEETING OF THE WASHINGTON ASSOCIATION.

The meeting of the Washington Association is being held while this issue is in press, consequently it is impossible to publish a report of it at this time. The complete report of the meeting will appear in our October number.

MEDICAL NOTES

OREGON.

Summer Session of Oregon Examining Board. The meeting of the Oregon Board of Medical Examiners was held at Portland, July 5 to 7. There were 102 applicants, being the second largest class for a number of years, most of them being graduates from Eastern colleges. Nine of these were women and there were thirteen osteopaths who received licenses to practise osteopathy. The Oregon board, like that of Washington, is a composite one, containing in its members representatives of the osteopaths, so that all who treat the sick are obliged to obtain licenses from the one examining board. The following is the list of the licentiates, with the colleges from which they received their degrees:

Adams, F. E., Univ. of Ore.
Anderson, E. H., Univ. of Ore.
Anderson, G. E., Barnes Univ., St. Louis.
Anderson, W. A., Univ. of Ohio.
Barber, M. C., Phys. & Surg., Chicago.
Barendrick, W. H., Univ. of Ore.
Bender, A. J., Rush Med. Col., Chicago.
Blakely, C. L., Univ. of Iowa.
Boyden, F. E., Northwest Univ., Chicago.
Bulla, J. M., Piute Med. Col.
Byrd, B. W., Willamette Univ., Ore.
Carruth, H. E., Jefferson & Kansas Med.
Dickinson, S. B., Phys. & Surg., Chicago.
Dremming, F. C., Northwest Univ., Chicago.
Edson, Anna P., Am. Sch. of Osteopathy.
Flamming, B. E., Univ. of Vermont.
Fouch, Mabel E., Am. Sch. of Osteopathy.
Gillis, H. B., Univ. of Ore.
Gillis, J. B., Univ. of Ore.
Graham, J. P., Univ. of Ore.
Hale, P. E., Hahnemann Med. Col., Phila.
Hartbrook, F. M., Northwest Univ., Chicago.
Hartwell, J. B., Harvard Med.
Hess, Orin A., Starling Med. Col., Ohio.
Howells, A. P., Am. Sch. of Osteopathy.
Hurst, J. G., Los Angeles Col. of Oesteopathy.
Karkett, R. B., Univ. of Mich.
Kauffman, H. R., Univ. of Ohio.
Keller, W. G., Am. Sch. of Osteopathy.
Lane, E. Hall, Am. Sch. of Osteopathy.
Leep, Roland, Univ. of Ore.
Little, T. C., Creighton Med. Col., Neb.
McCabe. Lawrence, Jenner Medical, Chicago.
McIntire, R. F., Student, Willamette Univ., Ore.
McNeal, A. M., Still Col. Osteopathy, Ia.
Milburn, J. A., McGill Univ. Can.
Myers, J. L., Phys. & Surg., Kansas City.
Ober, Martha H., Tufts Med. Col.
Osborn, C. C., Phys. & Surg., New York.
Patterson, C. E., George Wash. Univ.
Pemberton, W. L., Student, Willamette Univ., Ore.
Reith, John, Univ. of Ore.
Rich, E. E., Jefferson Med. Col., Phila.
Riggs, G. E., Univ. of Ore.
Robinson, C. E., Am. Sch. of Osteopathy.
Robinson, M. A., Am. Sch. of Osteopathy.
Ross, A. H., Univ. of Pa.
Rosenfield, A. S., Johns Hopkins.
Snell, D. E., Los Angeles Col. of Osteopathy.
Stafrin, C. E., Univ. of Ore.
Treadway, E. E., Denver-Gross Med. Col.
Underwood, Dora J., Denver-Gross Med. Col.
Van Barkle, J. A., Am. Sch. of Osteopathy.
Visetti. Charles, Univ. of Turin, Italy.
Wade, B. N., Northwest Univ., Chicago.
Walker, J. A., Northwest. Univ., Chicago.
Walton, R. W., Am. Sch. of Osteopathy.
Waugh, J. W., Phys. & Surg., New York.
Whitaker. F. C., Hahnemann Med. Col., Chicago.
Whitaker, H. E., Hahnemann Med. Col., Chicago.
Whitaker, J. C., Univ. of Ore.
Williams. F. L., Rush Med. Col., Chicago.
Williams, Mabel L., Los Angeles Col. of Osteopathy.
Wright, S. E., Northwest. Univ., Chicago.

Home Burned. The country home of Dr. George Skinner, near Hood River, has been completely destroyed by fire. A number of highly prized oil paintings were lost, together with a collection of rare old china and a valuable library.

WASHINGTON.

Smallpox in Alaska is completely under control, according to the report of Dr. M. H. Foster, of the public health and marine hospital service. Dr. Foster, who has recently returned from investigating the sanitary conditions among the Indians, states that he found no cases of leprosy, but that there were many evidences of the ravages of smallpox, whole villages in some cases having been depopulated.

Typhoid at Yakima. The report of Dr. L. L. Lumsden, upon his investigation of the typhoid situation in North Yakima, indicates that the source of the disease has been impure city water. His investigation has apparently covered all possible sources of contagion, and the correctness of his conclusion is confirmed by the almost immediate fall in the number of typhoid cases following the carrying out of his recommendation concerning the sanitary conditions. All but two or three of the new cases reported during the past month have been from outside of the city.

County Health Officer. Dr. A. L. Windom has been elected by the County Commissioners, at Wenatchee, to fill the position of County Health Officer, vacated by the resignation of Dr. McCoy.

Hospital at Stanwood. The hospital of Dr. O. R. Illen, at Stanwood, has been sold to Dr. D. McEacheran, of Stanwood, and Dr. L. H. Jacobsen, of Seattle.

School Physician at Tacoma. The Tacoma School Board has elected Dr. E. A. Montague to succeed Dr. A. E. Braden as school physician. Dr. Montague has been a resident of Tacoma for about three years.

Dr. Chas. MacCallum has located in Kalama, where he is taking the practice of Dr. L. M. Sims, who recently retired from active life.

Drs. J. M. Burnett and W. J. Warner have located in Farmington. Dr. Burnett has recently come from the East and Dr. Warner was formerly at the Walla Walla Sanitarium.

Dr. G. F. Medford, of Mt. Vernon, has accepted an appointment with the public health and marine hospital service at Port Townsend.

Dr. A. C. Steckle has located at Battleground, a small town near Vancouver, Wash., where he has purchased a drug store. In addition to being a capable physician Dr. Steckle is something of an athlete, having been a star football player in college.

OBITUARY.

Dr. John C. Davie died at Victoria, B. C., from tuberculosis, from which he had suffered for a number of years. He was a native of Wells, Somersetshire, England, where he was born sixty-seven years ago. He came to Victoria when a boy. After studying medicine in California he returned to Victoria, where he has practised during his whole life. His father was also a physician, Dr. John C. Davie, who practised in England before coming to Victoria. Dr. Davie began practice in partnership with his father. He was at one time president of the Provincial Medical Council. He was well known throughout the Province of British Columbia as well as the Pacific Coast. He was respected not only for his skill in the profession but for his integrity and upright life.

Dr. Bertrand Muscott was killed August 5 in the Olympia Mountains, twenty-five miles distance from Port Townsend, Wash. He was mistaken for a cougar by another hunter. The doctor was 42 years of age. He practised in New York for a time, then came to Lopez Island nine years ago. After practising there two years, he moved to Anacortes, where he remained for four years and then established himself himself at Friday Harbor. Besides his reputation as a surgeon the doctor had a knowledge of geology and mineralogy. He had been on a hunting and exploration trip for about a year.

Dr. A. E. Murphy, one of the leading practitioners of Salmon, Idaho, was shot and killed July 28. It is stated that the shooting was the outcome of a disagreement between the doctor and his assailant, whom he had promised to cure of a certain disease for a specified sum. The cure was said not to have been effectual and the result of the quarrel ended in the doctor's death.

REPORTS OF SOCIETY MEETINGS

WASHINGTON.

WHITMAN COUNTY MEDICAL SOCIETY.

Prest., W. C. Cardwell, M. D.; Secty., J. E. Else, M. D.

The Whitman County Medical Society met in the office of Drs. Stuht, Skaife and Mitchell, Monday evening, August 21, 1911. Present were: Drs. Benton, Brandon, Boyd, Baumgarner, Cardwell, Else, Palamountain, Skaife, Stuht and A. C. Johnson, of Spokane, and Mesdames Boyd and Skaife.

Minutes were read and approved.

Clinical Cases.

Dr. Skaife presented a man of 50 years of age, single, miner and common laborer. Family history negative. Patient has had malaria, rheumatism and smallpox. Denies any venereal infection. Present trouble began with a high fever, which lasted twenty-four hours, followed by eruption first upon forehead and then over body, but palms and soles of feet were free. Eruption at first bright red, later copper colored. Hoarseness developed soon after eruption appeared. Diagnosis syphilis.

Dr. Cardwell presented a case of a man who was kicked in the right temporal and frontal regions the 4th of June. Patient unconscious from time of kick, although he now states that there a few things that he remembers. Next day he could recognize some things but could not carry on conversation. No motor or sensory symptoms. Depression at site of fracture. Depressed portion removed. Patient remained delirious and showed but little improvement. Later removed from hospital to private house. No improvement. Taken home at the end of four weeks and began to improve soon after being taken home. Now he has made complete recovery, and the space left by the removal of bone has almost been filled up by the formation of new bone.

Papers.

Postoperative Ileus, with the Report of a Case. Dr. Johnson presented this paper. He stated that some symptoms were present in cases of laparotomy being serious in only about 5 per cent. He classified ileus as follows:

(a) Obturative. 1. Pressure from without. 2. Spastic. 3. Fecal masses.

(b) Paralytic. 1. Aseptic. 2. Septic.

(c) Strangulation form. 1. Angulation. 2. Tortion of the mesentery.

He stated that visible peristalsis was an uncertain sign in the diagnosis. Important in the prevention of ileus are the careful covering of all raw surfaces and the careful replacing of the bowel and mesentery in position.

In discussion, Dr. Boyd complimented the author upon the paper and commended him for disregarding certain traditions found in the text-books.

Dr. Else thought the paper a very good one and the subject a very appropriate one for discussion, as this is one of the most perplexing problems that the surgeon has to deal with. He thought that the three most important measures in the prevention of postoperative ileus are first, rapidity in operating; second, covering all raw surfaces, and third, avoiding unnecessary manipulation.

Dr. Cardwell does not believe in cartharsis following operation, but leaving the bowel to take care of itself.

Dr. Palamountain believed with Dr. Cardwell that cathartics are the cause of much mischief.

Dr. Johnson, in closing, stated that the digestion of food was not the only function of the bowel, but it also served as an avenue of excretion, and if the contents were allowed to remain in the bowel they would be reabsorbed and, therefore, he believed that the bowel should be emptied. He thought enemas are usually sufficient.

Pneumococcisepticemia. In this paper Dr. Palamountain gave a most excellent report of a boy who, in common with other members of the family, had la grippe in January of this year. He later developed abdominal distention and rigidity. On being brought to the hospital his temperature was 102 degrees. With the exception of the abdominal physical findings were negative. The bowels moved two or three times daily. On the fourth day the abdominal symptoms disappeared and dullness appeared in the lower right lobe. A diagnosis of pneumonia was made. Later pus appeared in the left pleural cavity, then in the right and later in the abdomen. The pus was aspirated each time as soon as it formed. Repeated aspirations were made and later ribs were resected on both sides. The pus removed from the three locations was of the same character. It had no odor. Cultures showed a few streptococci, pneumococci in abundance and another unidentified organism about the size of a red blood-cell with projections on some of them. This was regarded as a contamination. The boy was taken home after several months and then taken to Spokane, where the abdomen was opened. The diagnosis made there was that the original trouble was appendicitis followed by pus formation in the other localities.

This paper was freely discussed. It was the general opinion that the case was one of pneumococcisepticemia, for the pus showed pneumococci but no bacilli or motile organisms and, second, pus from a case of appendicitis almost always has the characteristic odor of the colon bacillus.

A vote of thanks was given Dr. Johnson. Garfield was selected as the place for the next meeting.

EXAMINATION QUESTIONS

WASHINGTON.

QUESTIONS ASKED BY THE BOARD OF MEDICAL EXAMINERS OF THE STATE OF WASHINGTON, AT
THE SEMI-ANNUAL EXAMINATION,
TACOMA, JULY 4-6, 1911.

(Ten questions are to be answered on each paper.)

ANATOMY.

1. What is the circle of Willis?
2. What bones form the orbital cavities?
3. Give the classification of joints, with an example of each.
4. Name the openings into the pharynx.
5. Name the ligaments of the knee joint.
6. Give the average length, nerve and blood supply of the large intestine and name the parts peculiar to it.
7. Draw a typical transverse section of the spinal cord and name the principal tracts therein.
8. Name ten (10) of the principal foramina at the base of the skull.
9. Project the right kidney on the anterior abdominal wall.
10. Name the internal rotators of the thigh.
11. (a) Give the origin and insertion of the diaphragm.
    (b) Openings through the same.
12. Give the origin, course and functions of the seventh cranial nerve.

PHYSIOLOGY.

1. Describe the method by which the blood performs its functions.
2. Give the physiology of inspiration and the change in respired air.
3. Describe the digestive process in the small intestines.
4. How is the heat of the body produced and maintained?
5. What is the function of the vagus?
6. Describe the condition of physiologic sleep.
7. Name the secreting and excreting organs of the body.
8. Name the ductless glands and give their functions as far as is now known.
9. Describe the fetal circulation.
10. Give the functions of the cerebellum.
11. Describe the sympathetic nervous system giving its structure and functions.
12. What is a calorie?
    What are the general requirements of a normal diet?
    What is the most essential component?

HISTOLOGY.

1. Name the elementary tissues of which the body is composed.
2. Describe the development of the fecundated human ovum
3. Give the component parts of tissues and describe connective tissue.
4. Give the nature and classification of glands.
5. Compare mucous and serous membranes.
6. Differentiate histologically between bone and cartilage; and arteries and veins.
7. Describe peripheal nerve endings, motor and sensory.

8. Give the histology of joints and tendons in general and the hip joint in particular.
9. Describe histologically the following: periosteum, bone marrow, protoplasm.
10. Compare histologically the small and large intestines.
11. Give the histology of the thyroid gland and the palatine tonsils.
12. Give the histology of the membranes of the brain and cord.
   Give the histology of the spinal cord.

PATHOLOGY.

1. State briefly the various etiologic theories of fever.
2. Describe an aneurism, and state what conditions are essential to its development.
3. Discuss the changes occurring in the spleen during an attack of typhoid fever.
4. Give the pathology of pseudoleukemia.
5. Describe the difference in the pathologic changes which take place in degeneration of the tissues, and those which take place in atrophy.
6. Give postmortem changes usually found in diabetes mellitus in, first, children; second, in adults of middle age and third, in adults of advanced age.
7. What pathologic conditions produce necrosis?
8. Describe a thrombus, embolus, and infarct.
9. In bony tissue, what variety of malignant growths usually occur, and why?
10. Give the pathology of the first and third stages of lobar pneumonia.
11. Discuss the pathology of gallstone disease.
12. Give the pathology of the abnormal pigmentation occurring in melasma supra-renalis.

BACTERIOLOGY.

1. Define: (a) bacteremia; (b) toxemia; (c) mixed infection; (d) secondary infection.
2. How would you stain gonococci and give distinguishing characteristics between gonococci, staphylococci and pneumococci?
3. Describe method of making the Widal test.
4. How does the body protect itself from the harmful effects of bacterial organisms?
5. Describe the bacillus tuberculosis and the diphtheria bacillus, the modes of growth and methods of diagnosing each.
6. What are anaerobic bacteria, spores, spirilla and protozoa?
7. Name the more important varieties of pathogenic bacteria classed under the following heads: bacilli, micrococci and spirilla.
8. What are the sources of bacteria in milk? Is freshly drawn cow's milk always sterile? What number of bacteria per cubic centimeter is permissible in milk offered for human consumption?
9. How are bacteriologic examinations of water conducted? Give method of determining the presence of the bacillus coli communis.
10. Describe spirocheta pallida. Where found and give method of staining.
11. Name diseased conditions resulting from infection by streptococci, staphylococci, gonococci and pneumococci.
12. Give the avenues of infection of tuberculosis, diphtheria, gonorrhea and tetanus.

CHEMISTRY.

1. Give composition and properties of urea.
2. Define decay, putrefaction and fermentation.
3. What may very high or very low specific gravity of urine indicate?
4. (a) Define an acid; (b) What is specific gravity?
5. Name active principles in gastric juice; in pancreatic juice. What is their chemical action in digestion?
6. Name the poison in "Rough on Rats" and its antidote.
7. What are ptomains? When would you suspect ptomain poisoning? Give cause of milk and ice cream poisoning.
8. What is the significance of nitrites in drinking water?
9. Give difference in inspired and expired air and tell why.
10. Define and give example of antiseptic, disinfectant, germicide and deodorizer.
11. Give formula, common name and describe methane.
12. Give normal composition of urinary calculi.

TOXICOLOGY.

1. What is a corrosive? What is a poison? Define death and give the signs and scientific tests.
2. Can a case of poisoning be diagnosed from symptoms alone? Can a case of homicide be made out if the body has been cremated? How do we determine if disease or poison caused death?
3. Give the common name of gelsemium. How does it cause death and what postmortem conditions are found? What is the average fatal period?
4. What is lysol? Give minimum lethal dose, mode of action and appearance after death.
5. Give the symptoms of fatal poisoning by purple foxglove; the postmortem appearances and findings.
6. What is the composition of "knock-out drops?" Describe, in detail, the symptoms in a fatal case. Give a simple test for the agent in the stomach contents.
7. Give the average lethal dose and fatal period in cocain poisoning; the mode of action; when and where found in the body, postmortem.
8. Following death by arsenic, in what organs and fluids of the body can it be found? How determine if introduced ante or postmortem? How long after death may it be discovered? Name two tests for its detection and state the minimum amount shown by analysis.
9. Give the fatal dose of chloroform: (1) By mouth. (2) By inhalation. How does it kill in each case, and where found postmortem?
10. To what agent is the poisonous property of tatar emetic due? Mention a common household remedy in which it is an active ingredient. Give the symptoms of poisoning by it, both local and constitutional.
11. How is wood alcohol obtained? Name the most constant condition following a poisonous dose. Taken in limited amounts, how does its action differ from ethel alcohol?
12. Describe ammonia. Introduced into the body, how does it cause death? Of what significance is its presence in a dead body during putrefaction?

HYGIENE.

1. (a) What conditions of ill health make residence in high altitudes dangerous?
   (b) Why?
2. How much fresh air is required by an adult for normal respiration during twenty-four (24) hours?
3. What gases are most efficient as disinfectants?
4. What hygienic precautions are necessary to insure healthy sleep?
5. Name four (4) of the commonest diseases communicable to man through cow's milk.
6. Differentiate between endemic and epidemic diseases.
7. Mention five (5) preventable diseases.
8. Name some of the nuisances dangerous to health.
9. Describe in detail the process of disinfecting by formaldehyde.
10. What precautions should a physician ohserve to avoid carrying contagious diseases?
11. Does change in climate require any change in food; if so, what?
12. What hygienic measures should be employed by persons prone to catch cold?

GENERAL DIAGNOSIS.

1. What is apoplexy? Describe shortly the pathologic condition present; give the characteristic symptoms and name the conditions from which you would distinguish it.
2. Given an enlarged testicle, what are the four principal conditions of enlarged testicle which you must consider and tell how to distinguish each.
3. Describe an ulcer of the stomach; give its commonest location. From what conditions do you have to differentiate it and tell how you diagnose it from a cancer of the stomach.
4. What is the pathologic condition in an acute osteomyelitis of the lower end of the femur, and from what conditions and how do you diagnose it?
5. What is infantile paralysis; what is its cause? Describe the lesion of the nervous system and give the characteristic symptoms.
6. Give the pathologic condition in a case of Potts disease and tell what would be the characteristic symptoms in a moderately advanced case located in the region of the tenth (10th) dorsal vertebra.
7. Describe carefully what is meant by an oblique inguinal hernia; describe the path which it follows and diagnose a small scrotal hernia from a varicocele.
8. Give the diagnostic signs of a pulmonary cavity of moderate size in the infra-clavicular region and tell how to distinguish it from an area of consolidation in the same location.
9. How would you diagnose a fracture of the anatomic neck of the humerus from subclavical dislocation?
10. What do you mean by concussion of the brain. Diagnose carefully from compression due to hemorrhage.
11. Describe a typhoid ulcer; give the cause of its formation; the complications which may result from it, and give the symptoms attending upon and subsequent to perforation of such an ulcer.
12. What is intussusception; give its cause and diagnose carefully from acute appendicitis.

GYNECOLOGY.

1. Define and give symptoms of retroversion, anteversion, inversion and prolapse of the uterus.
2. Classify uterine fibroids as to location.
   Which of the fibromyomata has the greatest tendency to undergo degenerative changes and to slough?
3. What is subinvolution, and what are the pathologic changes coexistent in the endometrium?
4. Give symptoms and diagnosis of gonorrhea.
   What are the sequences of gonorrhea in the female?
   Why is gonorrheal infection more grave in the female than in the male?
5. Differentiate between a tubal pregnancy and acute salpingitis.
6. What are the clinical history, symptoms, and differential diagnosis of ovarian cyst and ascites?
7. What are the most frequent causes of pelvic inflammations.
   Name the avenues of infection and tissues most likely to be involved.
8. Give the etiology and symptoms of acute cystitis.
9. What is coccygodynia? Give the symptoms and diagnosis.
10. Give the clinical history and symptoms of carcinoma of the cervix uteri.
11. Give the symptoms and diagnosis of tuberculosis of the tubes.
12. Define and give causes and symptoms of cystocele and rectocele. Give associated conditions.

OBSTETRICS.

1. Describe the superior strait, giving the bones that enter into its formation; its axis, plane, cardinal points and principal diameters.
2. Describe the third stage of labor.
3. To what dangers are the mother and child exposed by gonorrhea of the mother.
4. What are the functions of the placenta and does the maternal and fetal blood comingle in its circulation.
5. Describe some of the conditions that would warn you of impending puerperal eclampsia and what are its causes.
6. Name the more important forms of hemorrhage incidental to pregnancy and labor and give their causes.
7. Give the etiology and diagnosis of mastitis.
8. Describe the blood supply of the uterus.
9. What is (a) decidua vera, (b) decidua serotina, (c) decidua reflexa, (d) chorion, (e) amnion.
10. What are the immediate dangers and later results of laceration of the birth canal.
11. Why is abortion or miscarriage more dangerous to the mother than delivery at term.
12. How would you determine that a dead infant had been still born.

OREGON.

QUESTIONS PRESENTED BY THE BOARD OF MEDICAL EXAMINERS OF THE STATE OF OREGON, AT THE EXAMINATION, PORTLAND,
JULY 5-7, 1911.

ANATOMY.

1. Name and give the nerve supply of each of the muscles that move the eye.
2. Name the foramina found in the base of the skull. State the bone or bones in which each is found.
3. Describe the occipital bone.
4. Describe the formation and give the branches of distribution of the brachial plexus of nerves.
5. Through what vessels and openings would a blood corpuscle pass in going from the vermiform appendix to the lower horn of the right lateral lobe of the thyroid gland.
6. Name the structures that would be severed in an amputation of the thigh at the apex of Scarpa's triangle.
7. Give the course and distribution of the branches of the celiac axis.
8. Give the structure of the urinary bladder and give the vessels from which it receives its blood supply.

PHYSIOLOGY.

1. Describe the different forms of muscles in the human body and where each form is found.
2. Describe the act of respiration.
3. Give the functions of the liver.
4. Describe the process of digestion.
5. Give the functions of the blood.
6. Name the most important ductless glands in the body.
7. Give normal quantity of urine passed in twenty-four hours.
   (a) Give composition of normal urine.
   (b) When carbonates occur in urine is it alkaline or acid?
8. Describe osmosis, endosmosis and exosmosis.

HISTOLOGY.

1. Give the histologic structure of a long bone as seen in a cross section.
2. Name in order the histologic structures concerned in the process of the formation of urine from the blood and its delivery to the pelvis of the kidney.
3. Name the corpuscular elements found in normal human blood and give the relative number of each variety of corpuscles.
4. Give the microscopic structure of a lobule of the liver.

PATHOLOGY.

1. How would you differentiate chlorosis and pernicious anemia?
2. Give pathology of acute lobar pneumonia.
3. Describe the changes taking place in chronic interstitial hepatitis (cirrhosis of the liver).
4. Give pathology of acute infectious osteomyelitis.

CHEMISTRY.

(10 points will be allowed for correct orthography and composition.)

1. How would you detect the positive pole in a galvanic battery, and how would you know the negative pole in a faradic battery?
2. What is meant by the equivalence of an atom?
3. What is chlorine? What is its symbol? What is its atomic weight? What is its molecular weight? What is its specific gravity?
4. What are the antidotes for poisoning with the alkaline caustics?
5. For what is Trommer's test used, and how is it used?
6. For what is the Petenkofer test used, and how is it used?
7. What is the ultimate origin of urea in the human body, and how much is the normal daily excretion?
8. What is an alkaloid, and what is a general chemical antidote for poisoning with alkaloids?
9. What are ptomaines? Name three ptomaines? Are all ptomaines poisonous?

DIAGNOSIS.

1. Give the differential diagnosis between acute miliary tuberculosis and typhoid fever, without the Widal test.
   (b) What are the symptoms of intestinal perforation in typhoid?
2. How would you distinguish acute poliomyelitis anterior, in which the lesion involves the face and hand centers, from tubercular meningitis?
3. Give a complete picture of acute gastric ulcer.
4. What symptoms would lead you to suspect chronic interstitial nephritis without examining the urine?
5. Give symptoms of diabetes mellitus without urinary findings.
6. What symptoms would lead you to suspect abscess of the liver?
7. Give the symptoms of hyper hydrochloridia.
8. Give physical signs of phibroid phthisis.

METERIA MEDICA AND THERAPEUTICS.

1. Give antidotes for the following poisons: (a) Oxalic acid. (b) Corrosive sublimate. (c) Arsenic. (d) Gelsemium. (e) Copper sulphate. (f) Iodine.
2. What are the physiologic effects of ether inhalations?
3. Name the incompatibles of silver.
4. Name two drugs classed under the following: (a) Vesicants. (b) Irritants. (c) Escharotics. (d) Rubefacients. (e) Diaphoretics. (f) Diuretics. (g) Anthelmintics. (h) Cardiac depressants.
5. What are the physiologic effects of digitalis?
6. Give the therapeutic uses of aconite.
7. How do drugs classed as emmenagogues differ from ecbolics?
8. How much cocain would you use for a 3 per cent solution in a two-ounce mixture?

PRACTICE OF MEDICINE.

1. Describe the rash and give the morbid anatomy of scarlatina.
2. Give the etiology and pathologic nature of acute endocarditis. If the patient recovers, what permanent pathologic condition results?
3. Give the morbid anatomy of acute lobar pneumonia.
4. Differentiate neuritis from neuralgia.
5. Differentiate diphtheria from follicular tonsilitis.
6. Give the period of incubation and of eruption of the exanthemata.
7. On what symptoms would you base a diagnosis of typhoid fever?
8. Differentiate embolism and thrombosis.

THEORY AND PRACTICE OF OSTEOPATHY.

1. Of what value is osteopathic treatment in such an acute condition as rheumatic fever? What special portions of spine deserve attention and why?
2. In chronic constipation where would you expect to find the lesions?
3. Explain fully how you would treat an anterior upper dorsal.
4. What is a "double anterior innominate" lesion? How would you treat it?
5. Discuss the osteopathic theory of disease.
6. Give eiology and symptoms of scarlet fever.
7. Give symptoms and treatment of follicular tonsilitis.
8. Give treatment for dysmenorrhea.

DISEASES OF CHILDREN.

1. Give etiology, symptoms, prognosis and treatment of retropharyngeal abscess.
2. Define tetanus; give causes, symptoms and prognosis.
3. Define pericarditis, myocarditis and endocarditis.
   (a) Give causes of each.
   (b) Give diagnostic points of each.
4. How would you differentiate between pleurisy, lobar pneumonia and empyema?
5. State the capacity of stomach in infant one day old.
6. Give etiology, pathology, symptoms and treatment of acute gastroenteritis.
7. Having made diagnosis of a case of diphtheria, what instructions would you give to prevent spread of disease and give treatment of case.
8. Give etiology, symptoms and treatment of membranous croup.

NERVOUS DISEASES.

1. Define thrombosis, an embolus, a cerebral hemorrhage.
2. Name a disease having its morbid lesion in (a) the anterior columns of the cord, (b) the lateral columns, (c) the posterior columns.
3. Give symptoms of labio-glossopharyngeal (bulbar) paralysis when fully developed.
4. How would you diagnose a case of epidemic cerebrospinal meningitis?

SURGERY.

1. Bound Scarpa's triangle; mention the vessels and nerves in it, and tell how you would ligate the superficial femoral artery.
2. In an amputation of the forearm three inches above the wrist, what arteries will it be necessary to tie, and of what are they branches?
3. What surgical landmarks of the elbow-joint would aid you by their position in diagnosing between a fracture of the upper end of the radius and a posterior dislocation of the ulna?
4. What is genu valgum? State how it should be treated.
5. What structures are divided in the operation for strangulated femoral hernia?
6. What symptoms follow division of the radial nerve?
7. Give the differential diagnosis of pelvic peritonitis and impaction of feces.
8. What are the chief surgical diseases of the groin?

OBSTETRICS.

(10 points will be allowed for correct orthography and composition.)

1. Describe the development of the chorion.
2. What is the connection or relation between ovulation and menstruation?
3. Give differential diagnosis between pregnancy and ascites.
4. What is the characteristic symptom of placenta previa? What is the proper management of the case?
5. What is meant by the term Crede's method?
6. What is the proper method of procedure, in a case of arrested labor, when the arrest is caused by interlocked twins?
7. What procedure would you follow in a case of asphyxia neonatorum?
8. What is meant by the term, and what are the causes of icterus neonatorum?
9. What are the indications that would induce you to perform podalic version, and how would you perform the operation?

GYNECOLOGY.

1. Describe in full the operation for abdominal hysterectomy.
2. Give the causes and treatment of non-specific vaginitis.
3. Symptoms and treatment of cystocele.
4. Describe operation for rectocele.
5. What benefit is derived from intrauterine applications? (b) What harm may follow the above treatment?
6. What are the physical signs and treatment for a prolapsed ovary?
7. What is meant by the following terms: menorrhagia, metrorrhagia, metrorrhea, amenorrhea?
8. Give treatment for menorrhagia; for amenorrhea.

EYE AND EAR.

1. Acute otitis media; give cause, symptoms, complications and treatment; indications for opening the ear drum, give land marks of ear drum, point of selection in paracentesis and dangers attending the same.
2. Cause, diagnosis, complications and treatment of acute mastoid abscess.
3. Give the symptoms, prognosis and treatment of acute glaucoma, differentiate between acute glaucoma and iritis.
4. Give cause, symptoms, complications and treatment of ophthalmia neonatorum.

LEGAL MEDICINE.

(20 points will be allowed for correct orthography and composition.)

1. Under what circumstances may a physician be justified in producing an abortion, and how is the operation performed.
2. Give the symptoms of arsenical poisoning? How would you demonstrate that arsenical poisoning had been the cause of death in a given corpse?
3. A corpse is presented, death being caused by hypodermic injection of morphin. Tell how you would demonstrate the fact before a court?
4. A person having died from an over dose of strychnia, tell the various steps and methods you would employ to enable you to intelligently testify to the facts before a court.

BOOK REVIEWS

Edited by Kenelm Winslow, M. D.

Compend of the Practice of Medicine, including a Section on Mental Diseases and one on Diseases of the Skin. By Daniel E. Hughes, M. D., late Chief Resident Physician, Philadelphia Hospital, formerly Demonstrator of Clinical Medicine, Jefferson Medical College, Philadelphia. Tenth edition. Thoroughly revised and enlarged by R. J. E. Scott, M. A., B. C. L., M. D. Attending Physician to the Demilt Dispensary, New York. Author of "The State Board Examination Series," etc. With 63 illustrations. 12 mo.; XVIII-878 Pp. The Leather-Bound Series of Manuals. Full Limp Leather, Gilt Edges, Round Corners, $2.50. P. Blakiston's Son & Co., Philadelphia.

The astounding number of fifty thousand copies of this book has been sold and it has been called the student's bible. It has thus become an institution and for that reason may be criticized without fear of doing it any serious damage. The work is a boiled-down account of general medicine for the student. One should expect, then, to have the salient points emphasized. This is not always the case, especially in regard to those diseases in which abdominal surgery, by its autopsies on the living, has shed so much light. Thus, under gastric cancer, we find only this reference to surgery: "Surgical treatment has been of value in some cases." We would replace this by "surgery offers the only hope, and early diagnosis is the hope of surgery." Only the antiquated and conventional symptoms are given for early diagnosis and not the essentials, as a previous ulcer history or an attack of persistent indigestion occurring for the first time in a person of cancer age, accompanied by loss of weight, symptoms of food retention, or tumor and perhaps anemia. The same may be said of the ulcer symptoms which are the old classical and misleading kind, while the facts that the symptoms are intermittent, with long periods of freedom, and that pain is relieved by food (hunger pain), by vomiting, irrigation and alkalies, and occurs with the greatest regularity some time after each meal, are not brought out. Under gallstones we read, "surgical intervention is indicated **when** complications threaten and **when** the symptoms are so intense and persistent as to endanger the patient's vitality." The meaning of this sentence would be the right one if in place of "when" the word **before** were substituted. The dangers of an early gallstone operation are slight, while the dangers from delay as to operative mortality and complications, including cancer and myocarditis, are great. Also in describing the symptoms of gallstones we read that pain begins over the gallbladder. In early cases pain begins in the epigastrium and it is only when cholecystitis has supervened that pain and tenderness occur over the gallbladder. As a convenient, clear summary of the conventional text-book descriptions this book is an undoubted success.

Winslow.

Old Age Deferred. The Causes of Old Age and Its Postponement by Hygienic and Therapeutic Measures. By Arnold Lorand, M. D., Carlsbad, Austria. Third edition, translated by the author from the third German edition. 480 Pp., Cloth; $2.50. F. A. Davis Co., Philadelphia, 1911.

An interesting book by a very clever man who, to one chapter of facts, one of common sense, has added repetition and references to make a volume of 480 pages. It is written upon the assumption that "old age is a chronic disease due to degeneration of the glands with internal secretions of the thyroids, the sexual glands and the adrenals in particular." The author states, "In this work he will show that this degeneration is amenable to treatment, just as are other chronic diseases in general." Designed for both profession and laity, it in consequence hits neither. It may be very popular in Germany but in America, as Abe Pinkus says, "that's something else again." The physician will find the work neither scientific nor convincing. The layman will soon be beyond his depth. How much benefit he will derive from digesting theories unproven as yet, and which tend to create the impression that the profession at large is overlooking a cure for many conditions, remains to be seen. The text would create the impression that the author is a wondrous wise man. There are references and quotations galore, oft repeated and glittering phrases which read superbly but analyze poorly, e. g., "man does not die, he kills himself." The method of reasoning used more than offsets any good impressions created, for it is the one real scientists abandoned centuries ago, namely, inductive philosophy. The quality of the text varies so much that almost any adjective applied thereto will fit. Sentences like "flatulency and distention of the bowels are very frequently met with in women with diseased thyroids or ovaries, and are due to an irritated condition of the nerves of the intestines;" "there should never be flowers, and particularly no potted plants, in a living room, as they require air like ourselves; while to sleep in a room with plants is very deleterious," reminds one of Mary Baker Eddy's wanderings; while other passages reach the heights. There is everything between, including much unconscious humor. The book will do equally well for the physician's library or for parlor fiction. It is beautifully printed on rough, light, unglazed paper, and is a credit to the publishers. A frontispiece is to be found representing a portrait of the author. HEAVENRICH.

Progressive Medicine. Edited by Hobary Amory Hare, M. D., assisted by Leighton F. Appleman, M. D. Volume II; June, 1911. Paper, $6.00 per annum. Lea & Febiger, Philadelphia and New York.

This is a splendid number of this valuable quarterly. In it we have hernia, by Coley; Surgery of the abdomen, by Gerster; Gynecology, by Clark; Diatetic and metabolic diseases, by Stengel; and Ophthalmology, by Jackson. The accession of Gerster to the staff appears to be a happy one. One finds a rich review of German as well as of native literature in his department. There is a particularly good digest of X-ray work in gastric and intestinal disorders, although this is still in its infancy or hardly beyond the fetal stage of development. Drainage of the abdomen into the subcutaneous tissues in ascites is interestingly described and the new hollow buttons for securing it are pictured. The use of the gastroscope is considered and direct illumination of the stomach through an abdominal incision, with inflation, so that it presents something the appearance of a Chinese lantern. Clark's summary of progress in gynecology is, as usual, masterly. He has always made a specialty of cancer of the uterus and cancer in general. This contribution is of great interest. He shows that in England, in persons over 25, one death in every eight women and one death in every eleven men is due to cancer. A mass of evidence is adduced proving that the increase of cancer during the last generation is appalling. The section by Stengel and Jackson offer equally useful knowledge but these we have not the space to notice. It would be difficult to improve on this number of Progressive Medicine.

WINSLOW.

Hand-Book of Suggestive Therapeutics, Applied Hypnotism, Psychic Science. A Manual of Practical Psychotherapy for the General Practitioner of Medicine and Surgery. By Henry S. Munro, of Omaha, Neb. Third edition, revised and enlargea. Published by C. V. Mosby & Co., St. Louis; $4.00.

It is pathetic that an author who thinks so well and wisely on the affairs of life and its psychical aspects should signally fail to recognize the fatuity of his arguments for and the baneful ulterior effects of hypnotism, which this book advocates as a remedial measure. A hypnotist sets aside or dominates the will of his victim. In doing so he does not perceive that other entities, less altruistic than he, may also enter in, and "the last state of that man is worse than the first." Dr. Munro is a fine thinker, as far as he goes, but his head is set about by a dogmatic, egotistic force, bull-strong and pig-tight, so that any prowling idea, not in accord with his crystallized, anchylosed views on hypnotism, is promptly subdued by "Psychoanalysis for diagnosis and treatment of the psychoneurosis." The book has originality, is altruistic in tone, but of regretful ignorance in its general conclusions.

CRUTCHER.

Physical Examination and Diagnostic Anatomy. By Charles B. Slade, M. D., Instructor in Physical Diagnosis, University and Bellevue Hospital Medical College, New York. 12mo. of 146 Pp., illustrated. Philadelphia and London: W. B. Saunders Company, 1910. Cloth, $1.25 net.

This work is an outline of physical diagnosis. It endeavors to present the essentials and to omit the more complicated discussion of the topic. Some of the diagrams are excellent in demonstrating the subject along these lines. In point of view of completeness, and to some extent of accuracy, the book affords considerable opportunity for criticism. Thus a blue line on the gums is spoken of as significant of lead poisoning. This is not a blue line but a series of gray-black dots about 1 mm. from the free margin of the gums. Under irregularity of the pupils the fact that inequality is suggestive of syphilis is not mentioned. The pylorus is located under the free edge of the liver. Most X-ray pictures of the normal stomach show it near the navel. The kidneys are said not to be felt when normal and to be palpated during inspiration when, as a fact, they are usually more keenly perceived when slipping back through the fingers during expiration. However, as a plain, simple outline of the subject the book fills a purpose. WINSLOW.

Litora Aliena, from the Boston Medical and Surgical Journal. Octavo, 78 Pp. Price 50 cents. W. M. Leonard, Publisher, Boston, Mass.

This pamphlet in paper binding contains the experiences of one of the editors of the Boston Medical and Surgical Journal in travel through Great Britain and on the Continent. It reminds us of novels, popular at the present time, in which a motoring story is intertwined with travel—only in this case the story is replaced by professional comments on foreign medical matters, intermixed with descriptions of historic places. The style is charming, the diction elegant, the matter worth while and the book exhales a decided literary flavor. WINSLOW.

Hand-Book of Electro-Therapeutics. By William James Dugan, M. D., Lecturer on Electro-Therapeutics, Jefferson Medical College, Philadelphia, etc., etc; 91 illustrations; cloth, 242 Pp., $2.00. F. A. Davis Co., Philadelphia.

This book is what it purports to be, a treatise for the physician who knows little or nothing of electricity in its relation to medicine. The writer begins with chapters describing the various forms of electricity and the physics relating to the subject. The various batteries and electrical paraphenalia of use in medicine are pictured and described. The book is extremely practical and the author shows great moderation and common sense in his claims for the benefits to be derived from the use of electricity. It will be found to be of great value since it goes into all necessary details as to the methods of using the various appliances but, on the other hand, is not verbose. It is a good, plain description of a confusing matter and will be greatly appreciated by the general medical

WINSLOW.

Structure and Functions of the Body. A hand-book of anatomy and physiology for nurses and others desiring a practical knowledge of the subject. By Annette Fiske, A. M., Graduate of the Waltham Training School for Nurses. 12mo. of 221 Pp, illustrated. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, $1.25 net.

The present volume appears to offer nurses a sensible summary of physiology and anatomy. The chief difficulty in such works is the power to discriminate between the essential and the unessential as it is a difficult task to decide what to include in such a vast subject. It is a brief description of anatomy and physiology with a weaving of the two together in the same chapter. WINSLOW.

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The Journal of the State Medical Associations of Oregon, Washington, Idaho and Utah

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DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF THE PACIFIC NORTHWEST
Subscription Price $2.00. In clubs of twenty or more $1.00.

Entered March 14, 1903, at Post Office, Seattle, Wash., as Second Class Matter, under Act of Congress of March 3, 1879.

VOL. III. New Series. OCTOBER, 1911 No. 10

ADDRESS

SOME PROBLEMS FOR THE WASHINGTON PROFESSION.*

By Wilson Johnston, M. D.,

SPOKANE, WASH.

The meeting of the American Medical Association in Los Angeles brought the physicians of the Pacific Coast into personal contact with many of the men who are making American medicine what it is today. The inspiring and broadening influence of such a gathering makes itself manifest in the heightened ideals and greater endeavor of a quickened professional life. The acquaintances renewed, the friendships made, the ideas exchanged, the new conceptions of the work of the association gained are all factors which make the Los Angeles meeting the beginning of a new era of achievement and progress in medicine on this coast.

In order to expedite the work of an organization with the membership of the A.M.A., the segregation of the different branches into sections is an absolute necessity. On account of this, however, only those who attend the sessions of the House of Delegates realize the character and scope of the work of the association. In the reports of the standing committees is presented the thorough and systematic work of some of the ablest men in our profession, dealing not only with the things that concern the welfare of the physicians but also with those which relate to the social and economic well-being of the people. While the men who attend the meetings of the different sections are interested in the latest advances in medicine, they are equally concerned in the application of well known scientific truths to conditions affecting their own interests and those of the communities in which they dwell.

In my opinion the attendance of the meeting would be increased and the work of the association furthered if the reports of the standing committees were presented to the members at a general session. Then, instead of the members of the House of Delegates carrying to the state and county societies the attainments, hopes and aspirations of the association, we would have all those present returning to their homes enthused with the knowledge of what has been accomplished and anxious and willing to do their part to bring to fruition the plans of the organization. I recommend to this society that it instruct its delegates to the A. M. A. to work for such amendments to the By-laws as will make the reading of the reports of standing committees, at a general session, a part of the annual program.

In order that the work of the association may move forward along the lines of present endeavors, and that it may be in position to take the advantage of other avenues of usefulness which science may open, an increase in membership is necessary. Less than 50 per cent. of the members of the county societies are enrolled in the national organization. In this state only 60 per cent. of the men who subscribe to the journal are members of the association. The other 40 per cent. are needed and it devolves upon us as state and county organizations to see that every eligible physician is enlisted where his energy and influence will contribute to the good of humanity and of the profession. Before the next annual meeting a committee composed of members from the Board of Trustees and House of Delegates of the A. M. A. will present to the county societies for their approval a plan for amending the By-laws relating to membership. As a change in membership will affect the prosperity and usefulness of the county and state organizations, as well as that of the National association, I would urge upon the members the necessity of carefully considering whatever plan may be proposed. I believe it to be the duty of the trustees of this association to send to the county societies a copy of their opinion of the proposed amendment.

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*President's Address, read before the Twenty-Second Annual Meeting of the Washington State Medical Association, Spokane, Wash., Sept. 5-7, 1911.

The reputation of the physician depends on his ability to relieve the suffering and cure the ills of his patients, and the association, through the work of the Council of Pharmacy and Chemistry, has contributed greatly to his success by causing him to be furnished with pure and reliable drugs. In educating the people against harmful and worthless patent and proprietary medicines it has antagonized interests whose revenues are derived from the sale of such preparations. With an ingenuity and skill worthy of a nobler cause, these interests organized what is known as the ''National League of Medical Freedom,'' the purpose of which is to stir up opposition to whatever legislative measures the medical profession may propose. This league maintains an office in Seattle, from which is sent out to the people literature prepared by men whose work in life has been the habilitating of falsehood in the garb of truth. It is little wonder that some honorable people who hold honest but erroneous ideas of medicine should be enlisted in this organization. As the Council of Pharmacy and Chemistry cannot recede from the position it has taken until every patent and proprietary medicine is correctly labeled as to contents and purposes, it would appear that the Committee on Press and Public Information, of this association, will have abundant occupation in informing the physicians and people of the designs and purposes of this league.

The facts brought out at the investigation of the Bureau of Chemistry of the Department of Agriculture emphasizes the need of a National Department of Health. They show how the efficiency of an able scientist can be annulled and the law rendered ineffective when the head of the department is either out of sympathy with the work or susceptible to the influence of the interests concerned. I hope this association will see fit to send to Dr. Harvey Wiley a message expressing our appreciation of his work, our confidence in his integrity and our hope of his complete vindication.

The report of the Council of Medical Education is of interest to the physicians of this state in that it recommends practically the same requirements as are in vogue here at the present time, namely, one portal of entry to the practice of medicine for the right to treat human ailments by whatever methods and thorough examinations both written and oral, with clinical and laboratory tests. While advocating medical practice laws along broad and comprehensive lines, the Council is working and recommending a higher standard of medical education.

Under our efficient Medical Examining Board the medical practice law is working in a satisfactory manner. The many annoying problems incident to the operation of a new law are being eliminated. The better education and greater efficiency demanded of the physician of today is requiring of the examining boards a more thorough examination and a higher grade of tests. Naturally some of the men who fail feel that they have not been treated fairly and carry their grievances to the courts. Five such cases are now pending. The members of the examining board are occupying the unpleasant position of defendants in lawsuits because they have had the manhood and courage to enforce a law, the purpose of which is to protect the public against ignorance and incompetency. When we teach the public that the Board of Examiners is not concerned with the system the physician practises but only in ascertaining whether his medical training has been sufficient to enable him to properly diagnosticate their ailments, we will have done a great deal to gain their good will and support. It should not be necessary to ask the physicians to give their support to the men who are endeavoring to enforce a law the profession was instrumental in placing on the statutes, and in this trying situation they are certainly entitled to the undivided support of the medical profession.

In a paper read before the Canadian Medical Association, Dr. George E. Armstrong, of Montreal, takes up the question of water supply at considerable length. He asserts that, with the abundant pure water supply possible for every city in Canada it was a reproach to any municipality, large or small, to have water borne diseases He says, ''We should not be satisfied in Canada until the water supply throughout the country is made safely potable and make it so that the guide books can say that tourists can safely drink the water in any Canadian city.'' The typhoid epidemic in Milwaukee reminds us of the fearful toll in lives and money that is being levied in those cities which neglect their water supply.

The Chambers of Commerce and Commercial Clubs throughout the state are sending out literature inviting people to come and take advantage of the opportunities for material improvement offered by the different sections of this great country. They are interested in the preservation of watersheds, the creation of forest reserves, the development of water power and in all things that contribute to the commercial prosperity of the people, but not one voice is being raised in protest against the pollution of our streams; not one dollar is being spent to preserve a sanitary water supply. It requires no great stretch of imagination to picture the banks of the Columbia River studded with towns and villages and its basin supporting a large population. Unless measures are adopted to prevent our cities and towns from pouring their untreated sewage into the watercourses of the state, a heritage of sickness, death and expense is being laid up for the generations and communities that are to come. The time to stop an epidemic is before it begins. The time to build a city on sanitary lines is in its inception. Give a village a pure water supply with a well planned and properly constructed sewerage system and it is apt to grow to be a sanitary city with a low death rate.

To the efforts of the members of this association the city of Seattle owes the preservation of its pure water supply. The protection of the Cedar River water shed must stand forever as a monument to the intelligent forethought of the medical profession. What is good for Seattle ought to be good for every hamlet. This association should start a campaign for the protection of all waters available for domestic purposes nor should its efforts cease until no village existed whose water and sewerage systems had not been passed upon by medical and sanitary engineers. If the profession accomplishes nothing else, it will have saved more lives than medicine and surgery combined.

The situation in regard to tuberculosis, so far as the state is concerned, is practically at a standstill. No action was taken by the last legislature to establish state sanatoria for the care of the tuberculous poor, nor did it adopt the recommendation of the State Board of Health that a commission be appointed to study the best method applicable to the caring for tuberculous patients by the state and local authorities. While some of our cities are handling the tuberculosis problem with more or less success by philanthropic methods, still we must recognize that this is too important a matter to be left to charity and should endeavor to have the state assume the responsibility that properly belongs to it.

I would recommend that the committee on tuberculosis study the conditions affecting the control of this disease in the different parts of the state and suggest methods applicable to the peculiarities of the different localities. Their report should include information as to class of buildings necessary, cost of construction and cost of maintenance. With reliable data at its command it would be possible for the Committee on Legislation to prepare a bill dealing with this problem in an accurate, concise and practical manner.

Never in my opinion has the profession had the opportunity of leading men into sane and healthful ways of living that it has today. The stress of our modern business life is forcing thoughtful men to realize that, if they are to maintain their efficiency, they must lead the life of the trained athlete and practise moderation in all things, particularly in eating and drinking. We should teach them that drugs are useful in emergencies only, and then under the direction of a competent physician and that their best allies are pure air, pure water, sunlight, good wholesome food in moderate quantities. The "back to the soil and country life" movements are but the mute protests of a tired people against a foul smoke-laden atmosphere, the clang of the street car gong, the honk of the automobile, the exhaust of the motor cycle and the many other conditions of modern city life that render quiet, refreshing sleep impossible and are causing useless and unnecessary expenditure of nerve and physical force. The abatement of the smoke nuisance, the suppression of unnecessary noises, the better housing of the people and some conditions that must make for health and happiness.

I have hesitated to advise legislative measures to this association for the reason that throughout the length and breadth of this land there is an apparent indifference on the part of the public concerning everything proposed by medical men. There is a lack of confidence in our sincerity that must be attributed to the want of harmony among ourselves. For years there has been developing within our profession practices which slowly but surely are causing a loss of the confidence and respect of the people, a lowering of moral and professional standards, a lack of trust in each other and a disregard for that which is our first obligation, the welfare of the patient. The practice of fee division and commission giving has been the subject of articles in medical journals, of discussions in association meetings, and resolutions condemning it are to be found in the minutes of most of the county societies. In spite of this, it is on the increase and now threatens the usefulness and integrity of the profession.

In the September number of Pearson's magazine is an article on "The Farce of Medical Ethics," which should fill every medical man in the United States with sorrow, shame and joy. Sorrow for the men whose cupidity and lack of true ideals led them to drag the escutcheon of an honorable profession in the mire of charlatanism, shame that the majority first shampoo, the purpose of which is the removal of the vernix caseosa, should be most carefully perof a profession which has not hesitated to attack false and dishonorable methods in others, has not had the courage to grapple with the evils of itself; joy because in publicity we have found the surest and best way of eradicating this evil. Let the people know the men who are guilty of this practice and they will show in no uncertain manner their disapproval of it. Let them also know that their love of the spectacular and lack of adequate compensation for the services of the general practitioner has been a great factor in contributing to this evil. The public will pay more for a surgical procedure that takes a small amount of time and care than they will for the weeks of faithful attendance necessary for typhoid fever. A man will pay a big fee to have his leg amputated and will probably start a suit for damages against the physician who worked to save him a useful but deformed limb.

This association must deal with this problem at this meeting. We must stand before the public either as countenancing such practice or we must adopt effective measures for its correction. Every physician worthy of the name, every man with a spark of love for or an atom of pride in the noble profession to which he belongs should give his best thought and energy to aid it in regaining that which has been lost. The thanks of this profession are due to the author of the article and to Pearson's magazine for the service they have rendered. Only when we can appear before the public and assure them that the members of this association are by education and training qualified physicians and practise methods becoming of gentlemen, can we hope to receive their confidence and support in such a measure as will make possible the realization of our dreams of health and happiness from preventive medicine.

Perineo-Urethral Prostatectomy. To summarize: the last word as to prostatectomy has not been, and cannot yet be said; the evolution of this most important surgical achievement, virtually begun in 1885, is not yet complete. My impression is that the removal of the prostate through its sheath, commonly called perineal prostatectomy, should be abandoned by the average operator, as it has been largely abandoned even by the French school, who a decade ago revived and improved Dittel's operation of 1890. Of the two standard procedures, median perineo-urethral prostatectomy seems the operation of choice. Under exceptional conditions, such as the presence of large vesical calculi, a supra-pubic incision may be required. In this event I am inclined to drain the bladder through a perineal "button-hole," which adds but little to the operation, but subtracts much from the danger of sepsis.—(Belfield Surg. Gynecol. and Obstet., Sept., 1911.)

ORIGINAL CONTRIBUTIONS

THE FUTURE HYGIENE.*

By J. N. Hurty, M. D.,
INDIANAPOLIS, IND.
Indiana State Health Commissioner.

For one hundred and fifty years yellow fever plagued Havana. Men were ignorant and, therefore, must suffer. We frantically tried to stay it by quarantine. We thought that somehow its infection was carried in clothing. He was a pariah who had yellow fever, and so also was he who had come from a zone where it existed. People held their breaths when a yellow fever patient was in sight, and would as soon handle red hot iron. This was ignorance. The mosquito, the carrier of the infection, was disregarded and when the people were told by the discoverer that the mosquito was the means of distribution, they scoffed the truth and derided the discoverer of the truth.

To prevent the introduction of yellow fever into this country, a special quarantine was maintained from the Rio Grande along the Gulf Coast, around Florida and up the Atlantic to Charleston, costing annually hundreds of thousands of dollars, and not keeping out a single case of yellow fever. Sulphur was burned by tons and the gas forced into ships, ruining machinery, cargo and furnishings. Travelers were delayed in quarantine camps and commerce was halted. All this was the result of ignorance. We did not know and understand.

Dr. Carlos Finley, with observation powers superior to all who had gone before, perceived that the infection of yellow fever was not carried in clothing but was carried by mosquitoes and he so announced. The darts of ridicule flew at him from every quarter. Editorials in lay and professional prints showed how foolish were his contentions. Paragraphers and cartoonists had their day, and amidst all of these manifestations of ignorance and conceit Dr. Carlos Finley stood alone, calm and confident, and now he has his day. Truth is born in pain. The old yellow fever quarantine is now a thing of the past, and we smile sadly at mention of it.

THE FUTURE.

What does the future hold for the prevention of other diseases? Therapeutics has gained many victories, but to hygiene belongs, without doubt, the place of honor in modern medicine. How completely therapeutics failed with yellow fever, and how complete was the victory of hygiene! Was ever a case of typhoid fever cured with medicine? Who can positively and unequivocally say yes? The long time universal acceptance of the adage— "an ounce of prevention is worth a pound of cure"—is not strange, for it is an obvious truth. It is, however, passing strange, that a practical people go little further than to acknowledge this truth and halt at its thorough, practical application. A medicine to cure yellow fever is no longer sought for. Therapeutics carries no burden of investigation in that line, and to find a medicine for the cure of cholera no longer concerns that branch of medicine.

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*Read before the Thirty-Seventh Annual Meeting of the Oregon State Medical Association, Portland, Ore., July 10-12, 1911.

We know there are two ways for fighting disease. We may destroy and keep the germs out of our bodies and we may produce immunity. We now practise the first way with yellow fever and cholera, and the second with smallpox. It seems likely that only in comparatively a few diseases will their hygiene consist in the destruction of the pathogenic microbes outside of the human body. It is not now the ideal of hygienists to preserve man from all contact with the germs of infection. Often we find the living body remains intact in spite of its containing disease germs.

When Löffler first found diphtheria bacilli in the throat of a healthy child, doubts arose in his mind as to the etiologic role of his microbe. Before that time hygienists believed that the infectious germs were only present when disease existed. Now it is known that a man may be the host of diphtheria, typhoid, pneumonia and other germs without necessarily developing the corresponding disease. It has been proven to be possible to introduce quantities of tetanus spores into the body of a guinea-pig without the animal, which is exceedingly prone to develop tetanus, acquiring the disease. But Vincent has shown that by starving the animal, worrying it or exposing it to too high a temperature, its resistance can be overcome and tetanus produced. Such results could not fail to influence practical hygiene.

Until rather lately it was believed that all typhoid infection was water borne, but now we know that the disease is contagious as well as infectious, and also that flies and very likely other insects carry it. Some hygienists even contend that typhoid fever is more frequently transmitted by contact than in any other way. In 1904, five cases of clinical typhoid appeared at the Indiana Soldiers Home, at Lafayette. The water supply from deep wells was faultless, the sewerage of the institution was perfect, and the cleanliness also perfect. The questions were: where did the infection come from, and how many mild cases were there? Through laboratory tests by the Widal method and by bacteriologic examinations of feces and urine, sixty-eight cases were discovered. Some of the unrecognized cases had been diagnosed as malaria, some as obscure heart trouble, some as debility and others as stomach and bowel trouble. Finally, four of the laundry force were taken down, also three nurses and two of the doctors.

Three months before, a son of the Commandant had come there from college with typhoid fever and had almost succumbed. All excreta had been disposed of through the sewer and fly carriage was impossible, and so only one other method of transmission, namely contact, was possible. So the doctor in his rounds was observed and as he failed to wash his hands after handling the typhoid patients and passed on to others, it was concluded he was the carrying agent. He was, therefore, asked if he had handled the first case in the same way and he said he had. Eventually he came down with typhoid and very nearly died. The washings of the door knobs of the doors of the typhoid patients' rooms all yielded colon bacilli.

The future hygiene will certainly require most careful deportment on the part of doctors and nurses. German medical literature tells of a woman who owned a bakery in Strassburg, and it was observed that her employes were constantly being attacked with typhoid fever. The bakery was very clean and passed the rigid German sanitary inspections and so the authorities, as the care of the sick persons was upon the city and a public expense, made a thorough investigation. It was found the proprietress had had typhoid fever ten years before, and that her urine and feces were teeming with typhoid germs. She prepared all of the food for her employes and all used the same closet. And so again the future hygiene will look further than the water supply for source of typhoid infection.

At the Conference of Water Works Officials with the State Board of Health, at Indianapolis, the president of a certain city water company told of a case of typhoid next to his own house, and he learned by inquiry that the doctor had not given the slightest directions concerning the disinfection of the discharges. And, furthermore, the said doctor said he never had given any such directions in all his years of practice. The water works president added, "what shall we do to protect ourselves against the medical profession?" Others present told of like experiences, and I repeat the matter here that we may be reminded that the dirty, negligent doctor is not an honor to medical science and that the eyes of the public are upon us.

The future hygiene will also carefully consider immunity in all its phases, and especially the point brought out by Shiga, the eminent Japanese bacteriologist, who has shown us that quite all forms of diarrhea are due to the dysentery bacillus. In a word, that all continued infectious diarrheas, whether mild or severe, are really dysentery. Twelve years after Shiga had had typhoid fever he examined his blood and found it absolutely free from agglutinating or sensitizing substances, yet he lived unattacked when he unquestionably in an epidemic of the disease, had taken in the infection. Evidently, then, immunity does not depend upon the presence in the blood of protecting substances, for many other instances like that of Shiga's are known.

And, again, patients have been known to have a relapse when the blood contained large quantities of agglutinating and sensitizing substances. For these reasons, Widal, the inventor of the sero-diagnostic method of typhoid fever, has always contended that those properties are not indicators of a resistant state of the body. After having proved that his serum contained no agglutin, Shiga injected himself subcutaneously with liquid products of the bacillus typhosus. He found that already after eight days the agglutinating power of his serum was manifest in a dilution of 1 in 640, and the sensitizing substances showed a corresponding increase in the same time. The serum of another person who was injected with the same substance showed an agglutinating power only in a dilution of 1 in 80 after the same interval. This great difference, for Shiga's serum agglutinated eight times more strongly than the other man's, may be explained by the fact that the Japanese bacteriologist had had typhoid, whilst his colleague had never suffered from the malady. Shiga's immunity, therefore, consisted in a vital modification of his cellular elements.

The future hygiene will consider what medication may be practised. In his researches on acquired immunity towards the cholera vibrio, R. Pfeiffer was much astonished to see his vaccinated guinea-pigs dying in spite of the presence of large quantities of sensitizing substances in their body liquids. These animals died of the poison produced by the cholera vibrio. Now this result can readily be produced by paralyzing for a certain time the activity of the white blood cells.

Cantacuzene succeeded in killing by vibrionic infection even highly immunized guinea-pigs by preliminary injection of small quantities of morphin. Thus it was sufficient simply to retard the phagocytic action by a drug in order to make the animals lose their immunity and to render them an easy prey to the cholera germs. Medication, therefore, is dangerous, and must be practised only in the light of immunity experimentation. Preventive medicine may come to mean, in part, the prevention of the giving of medicines. For, if only the phagocytes can fight off invading disease germs, and if some medicines hinder or damage the phagocytes, then it follows that said medicines should not be given, at least at times. This is not at all strange, for we have always known that the very best medicines are at times contraindicated.

ALCOHOL FAVORS DISEASE.

More medicines than morphin are adverse to phagocytic action and among them is alcohol. It is well known that persons who indulge too freely in alcohol show far less resistance to infectious diseases, especially to pneumonia, than abstemious individuals. The vaccinations against hydrophobia carried out on persons bitten by rabid dogs are rarely failures; but when the person is an alcoholic they are general failures. Delcarde found that rabbits, to which he administered alcohol in the course of immunization against anthrax, died of this disease, whilst the control animals, which were not given alcohol, did not die. And Abbot has confirmed these experiences by proving that animals, if subjected to the influence of alcohol, become more sensitive to the harmful effects of certain microbes, such as streptococci, staphylococci and bacterium coli.

Latavan administered alcohol to rabbits for several weeks and then injected them with a small dose of the first vaccine of anthrax. Six animals thus treated died after a more or less prolonged illness; all of these contained anthrax bacilli in their blood and organs. Of four control rabbits which received the same dose of the same vaccine, but to which no alcohol had been administered, only one died, and the other three enjoyed perfect health. Experiments by others have shown clearly that alcohol inhibits the activity of the phagocytes, and if their health and forcefulness against invading germs be lowered, defense must be feeble. As a logical consequence of the experiments on the weakening of immunity under the influence of alcohol, it has been suggested that this substance is contraindicated in the treatment of infectious diseases. The future hygiene will teach temperance from a truly scientific standpoint.

THE HYGIENE OF THE ALIMENTARY CANAL.

Metchnikoff has an exhaustive essay upon "The Hygiene of the Alimentary Canal," from which I draw freely. It is safe to say that, with a normal alimentary canal acting normally, health and resistance to disease will quite always prevail. It is now proven beyond doubt that microbes can penetrate into the blood by way of the intestine. Ravenel has shown that dogs fed on butter containing virulent tubercle bacilli exhibited the first and only lesions, not in the intestine, but in the lungs or other organs, principally, however, the lungs, no lesion occurring in the intestine itself except in few instances. This happens when the intestine is believed to be intact, but far more freely when there is constipation, diarrhea, or intestinal indigestion. After extra hearty meals, too, and after gorging especially, microbes may penetrate more freely through the intestinal walls and find their way to organs and attack them. Dilatation may, therefore, be conducive to infection.

The future hygiene then will insist upon keeping the intestinal canal in normal condition. In the Pasteur Institute, where great experience in the methods of preparation of therapeutic serums has been gained, they have for years made it a standing rule never to bleed a horse after a meal, because under these conditions the development of microbes may take place in the serum, even if it has been obtained under the strictest aseptic precautions. There they say, "an animal should always be kept fasting before being bled, if it is to furnish sterile serum."

The greater liability of the body to microbial invasion after a meal is probably due in part to the fact that the food is plentifully supplied with them. For instance, a glass of milk will contain untold millions and very frequently some of them are pathogenic. The more bullets in the air the more the likelihood of being hit. If digestion be vigorous, it would seem there would be lessened chances of the organisms introduced with food penetrating the intestinal walls; but digestion, even in animals, is very frequently more or less impaired. Besides, in eating, we almost always take in some rough particles, a minute piece of bone or oyster shell, a grain of sand, berry seeds, or scratching particles of some kind. These may wound the mucous lining of the intestine as they occasionally do that of the mouth, and thus make a portal of entry for microbes into the tissues beyond.

Eating, therefore, is an act not unattended with danger, just as walking in a crowded street is dangerous. In large cities a number of people are injured or killed daily when simply pursuing their ordinary life, the life they have followed for years. This danger everyone recognizes, and takes precautions accordingly. In eating, it is true, we recognize the danger of poisons, and toxin poisoning is not of infrequent occurrence. But until lately it has not plainly appeared that we take our health and our lives in our hands when we sit down to eat. The future hygiene will emphasize from a laboratory standpoint, from a highly scientific basis, what is already taught on general principles, that food must be clean, always well cooked, slowly taken, and well, very well masticated. It must be taken, too, in moderate quantities, for dilatation of the intestinal tract, the stretching of membranes, favors the passage through them of germ enemies.

The so-called digestive leucocytosis is deeply interesting. Many observers have found that in man, as well as in several other mammals, the number of white blood cells increases some time after meals. There are differences of opinion as to the explanation of this phenomenon. Nicolas and Lot have made investigations of this matter and have established the fact that in the day the number of white blood cells rises after a meal, especially if the food be raw beef. Even in rabbits, after feeding on cabbage and bread, the white cells increase. In one series of experiments the greatest number of leucocytes was found one hour and a half after the meal.

What is the reason for this analogy with the leucocytosis of disease, an analogy so striking that one might be tempted to inquire whether the digestion of food is not also a kind of infection? The fact of the matter is, a certain number of microbes penetrate through the intestine and find their way into the circulation and, it being the business of the leucocytes to evict the intruders, they dutifully rally to their work. What will future investigation discover in connection with digestive leucocytosis, and what bearing will it have upon dietetics?

The theory of von Behring, that tuberculosis in man is caused by the ingestion of Koch's bacilli in early childhood, has much solid ground to stand upon and has lately given rise to a great deal of research work on the mode of entry of microbes into the inner organs and the blood by way of the intestine. Recently, Calmette and Guerin, as well as Vallee, have published much new data supporting this contention. Whilst the direct introduction of tubercle bacilli into the trachea of calves was, in Vallee's experiments, followed only by slight lesions, the absorption of the same bacilli by way of the intestine produced a severe tuberculosis of the lungs.

Not all pathogenic microbes show so great a power of invading the body from the intestine as tubercle bacilli. Thus, it is most difficult to cause anthrax in guinea-pigs by making them swallow the virus. But the slightest lesion of the intestinal wall is sufficient to enable the swallowed bacilli to enter into the body and to cause fatal infection. Although there still remain several open questions with regard to the mode of infection by way of the intestine, yet no doubt remains as to the very great importance of this gate of entry.

The entirety of the results which have been accumulated by science prove that the intestinal wall is worthy of being made the subject of most careful hygienic consideration. Our recently acquired knowledge of infectious diseases has shown that many of those which were formerly attributed to special miasmata circulating in the atmosphere, in reality originate from wounds caused by insects. Especially to English investigators science and humanity are indebted for this fundamental idea.

After the memorable discoveries of Manson on the role of mosquitoes in the transmission of filariae, Bruce has shown that the disease called nagana is caused by a trypanosome which is inoculated through the tse-tse fly. Since then a large series of arthrapoda have been recognized as dangerous intermediaries which transmit to man and to animals the virus of human plague, malarial fever, yellow fever, relapsing fever, sleeping sickness, Texas fever, spirillosis of fowls, etc. Most frequently diptera, such as mosquitoes and flies, are the transmitting agents. In bubonic plague fleas play the role of inoculators; in relapsing fever bugs and ticks fulfill similar functions.

Within the last few years insects and arachnidae have attracted the most interest of medical men and naturalists and, whilst formerly only a few amateurs devoted themselves to the detailed study of the diptera and arachnidae, these classes have nowadays become the object of most assiduous study to a great number of scientists. As a result of these investigations, an elaborate system of hygienic measures has been worked out which consists in endeavoring to avoid and to destroy mosquitoes, rats carrying fleas, flies, bedbugs, etc. A most simple hygienic precaution was recommended by Koch against African relapsing fever. According to him, one need only avoid the huts which are infected with ticks and sleep at a distance from the road of the caravans in order to prevent having this disease. How simple, then, is the hygiene of this disease.

To the diseases originating from the bites of arthropoda correspond the diseases originating from wounds of the intestine and caused by entozoa, mainly intestinal worms. Formerly, great attention was given to these parasites, to which were attributed all sorts of local and general maladies. In therapeutic systems of fifty or sixty years ago, a great deal was said for vermifugal remedies, by which many intestinal troubles and even certain nervous disorders were believed to have been cured. Since that time, the parasite worms have been removed to a very different plane, and they have been nearly forgotten in favor of the microbes, to which is assigned the place of honor in medicine. The worms were so often seen living quietly in the intestines and their hosts were found not perceptibly suffering through them, that physicians had grown accustomed to consider them as almost or quite inoffensive. And yet this opinion is by no means justified. True, an intestinal worm may not impair health in any way, just as many mosquitoes, fleas and ticks may prick men and animals without causing anything more than a transitory and not painful itching. But, on the other hand, it is equally certain that the bites of intestinal worms may cause as much evil as the pricks of arthropoda carrying pathogenic microbes.

Many examples and observations could be cited which supply a broad basis for concluding that intestinal worms play no inconsiderable part in the etiology of diseases of the alimentary tract and of those maladies which are inoculated through that tract. The success which frequently results from vermifugal treatment in nervous patients suffering from appendicitis, has proven the importance of the entoza in this disease. It is more than probable that a campaign against intestinal parasites, which would be conducted on similar lines to the war now waged against mosquitoes and other microbe carrying insects, would be a move which would produce marked results in prophylaxis.

As parasites of all kinds, microscopic and macroscopic, from the minute bacillus typhosus to tenia solum twelve feet long, find entrance to our bodies in food and drink, it behooves us as reasoning creatures, to take care of our food. We must all agree with Metchnikoff (whom I again credit with most of what I give in this paper) that raw foods are unhygienic. Hygienic measures, to prevent the introduction of disease by way of the alimentary canal, must keep vigilant watch over everything that enters the mouth. All foods, including water and milk, vegetables and fruits, should be submitted to a boiling temperature for at least five minutes for water and milk, and for other articles a sufficient time to thoroughly cook them.

In addition to this, cleanliness must separate us from our excreta, by which I mean that all sewage must be disposed of in a sanitary way and everything possible be done to prevent the reintroduction of our excrement into our alimentary canals. Let these things be done by all persons, all of the time, and Pasteur's grand inspired message, "It is possible for man to banish all parasitic diseases from the earth," would in greater part be realized.

BALDNESS. ITS CAUSE AND CURE.*

By Franklin Sawyer Palmer, M. D.,
SEATTLE, WASH.

Among the anomalies of medical nomenclature, there exists perhaps no more curious instance than in the case of the usual designation of baldness. Although some of the most active and keenest brains are contained within some of the baldest heads, yet it has not been noted, as far as I know, that their owners have that special preëminence or renown which would in a colloquial sense entitle them to be classed as being any more "foxy" than their more hirsute brethren; and yet the bald-headed multitude are accused of resembling foxes because foxes are said to be subject to baldness of their pellicles. Thus in some way fox (derived from the Greek 'αλώπηξ a fox) and baldness (alopecia) became, medically speaking, synonymous terms. The detailed history of this transmogrification had best be left to the tender mercies of the etymologists and the zoölogists.

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*Read before King County Medical Society, Seattle, Wash., May 15, 1911.

Baldness may be broadly divided into the congenital (alopecia adnata) and the acquired varieties. As congenital baldness is rare and comparatively unimportant, it may be dismissed from further consideration with the statement that the prognosis is favorable and that treatment is generally unnecessary.

Likewise the baldness of old age (alopecia senilis), a physiologic condition that begins to make its appearance in the scalps of most of us at about the forty-fifth year, and that is progressive and generally speaking irremediable, may be passed by with this brief description.

The two varieties that remain to be considered are (1) Premature baldness (alopecia prematura) and (2) Circumscribed baldness (alopecia areata).

Premature baldness may be either idiopathic or due to some local or general disease. The so-called "idiopathic" variety is, now that the etiology is better understood, limited to those cases wherein only an hereditary predisposition can be made out as the causal factor. The baldness, generally temporary, due to acute fevers and other general diseases such as syphilis, leprosy, diabetes, etc., need not detain our attention.

Premature baldness is caused chiefly by antecedent dandruff, which may affect the scalp in the dry so-called pityriasis, (πίτυρον, bran) or in the oily form, seborrhoic dermatitis or seborrhea. (sebum, sevum, suet and ῥέω I flow).

C. J. White [1], in a study of 794 cases of baldness in private practice, found that heredity was a causal factor in only 30 per cent., while dandruff figured in the etiology of 79 per cent. of his cases. Other causes noted by him were systemic depression, overwork, worry, invalidism, in 21 per cent.; fever in 11 per cent., and maltreatment of the scalp in 50 per cent. Baldness attacks men at an earlier age than women, before the age of 30 in 84 per cent. of men but in only 33 per cent. of women, yet women are more prone to baldness than men in the proportion of 54 to 46. Maltreatment of the scalp, White defines as faulty hygiene, including rough usage of brushes, combs and massage in presence of dandruff; shampoos oftener than once a week or less often than once a month; the use of drugs in any form on healthy hair or scalp; the continued use of too drying alkaline soaps; the frequent or constant exposure of the uncovered head to the rays of the summer sun; the daily sousing of the head in shower baths or salt water and the modern overtreatment of the normal scalp by barbers and hairdressers.

It may be accepted as proved, then, that the chief cause of baldness of the usual premature type is due to a preceding or coexisting dandruff. Usually the dandruff persists for some time before any falling out of the hair is noticed. Beginning in childhood, at the tenth or twelfth year as a dry scaling, it is apt to become oily about the fifteenth or sixteenth year and the scales then adhere to the scalp and cease falling, while the hairs begin to fall.

Now, if dandruff be the cause of baldness, what is the cause of dandruff? Dandruff, which is variously designated by dermatologists as seborrhea sicca, seborrhea oleosa, seborrhoic dermatitis or seborrhoic eczema, has been thought for many years to have a microparasitic origin. The discovery of the spore of Malassez[2], in 1874, was followed by the experiments on mice and rabbits in 1882, of Lassar and Bishop, who maintained the parasitic origin of alopecia; but Blascko repeated the same experiments with only negative results. Saalfield[3], Kaposi, Brocq, Besnier, Doyon, Gruenfeld, Speitscha, Pashkis, and Michelson discredited the parasitic theory advanced by Lassar and Bishop, although one of these investigators, Saalfield, found microorganisms present, some of which were probably identical with the microbacillus of seborrhea of Sabouraud[4] (1897), which Unna and Hodara [5], in 1892, described under the name of bottle bacillus. According to Sabouraud, this microbacillus enters the mouth of the hair follicle, multiplies, and forms a thin microbic lamina which separates the hair shaft from the follicular wall. Epithelial irritation causes the encysting of the bacilli in a plug or coccoon as seen in the comedones of acne. Then follow increased sebaceous flow, hypertrophy of the sebaceous glands, and progressive atrophy of the hair papillae.

Gilchrist is very certain that the acne bacillus is the primary cause of acne. He was the first to obtain a pure culture and he found it pathogenic in mice and guinea pigs. Thibierge[6] admits that the bacillus is the chief but not the only cause. Sabouraud claims that this bacillus is not only the cause of the comedo plugs of acne but that it is present and is the cause of all forms of seborrhea of the scalp and body. Norman Walker goes still further and regards psoriasis as simply an extremely dry form of seborrhea. Fleming[7] describes this organism as a small, gram staining bacillus, 1 to 4 μ in length and $\frac{1}{2}\ \mu$ in thickness. He says[8] that it is present in almost all skins but in the great majority of cases produces no symptoms. He regards a decrease of the individual power of resistance as probably the cause of the disease.

Acording to Norman Walker[9], the prevalence of baldness in males is probably due to the frequent ministrations of the barber rather than to the wearing of hard hats. He also holds that baldness would be less common were it not for the prevailing tradition that washing the scalp is injurious.

The etiology of alopecia has been studied and a rather original solution of the question put forth by Parker[10], of Detroit, who claims to have discovered and isolated in 1901 a poison that he terms "trichotoxin" (hair poison), a cystalline body soluble in water and ether but insoluble in alcohol. His somewhat ingenious theory is that this trichotoxin circulating in the blood exerts a selective effect on the hair papillae, causing them to undergo atrophy, the hair of the scalp being most easily affected on account of the underlying practically bloodless occipitofrontalis aponeurosis causing lack of nourishment. Parker's trichotoxin is produced in the residual air in the lungs, whence it is absorbed and taken up by the blood. Thus the cause of baldness, according to his theory, are (1) absence of upper chest breathing which allows trichotoxin to develop in the lungs and (2) the circulation of this trichotoxin in the blood. According to his observations during a period of twenty years, he has found no exception to the rule that persons affected with common baldness do not employ upper chest breathing, while those not affected with the disease as regularly do employ this form of respiration. Victims of pulmonary tuberculosis, he claims, are immune to common baldness and, as a rule, have luxuriant hair.

Parker's cure is as simple as the alleged cause. Sufferers from baldness should simply practise upper chest breathing and within a week the dandruff (present in 80 per cent. of the cases) disappears and within five or six weeks new hair appears. In Parker's experiments on dogs, hens and pigeons, the injection of a watery solution of trichotoxin invariably produced shedding of their coats, which began in a few weeks and was complete in from three to five months. He considers local remedies alone of no value, unless combined with upper chest breathing, in the carrying out of which he directs that the upper ribs should rise each time breath is inhaled. Hold shoulders well back and down. Employ forced expiration of moderate degree.

His method of obtaining trichotoxin is as follows: Expired air is enclosed in a clean flask with a small amount of water and the whole is kept at body temperature in an incubator for four or five days. The water is then evaporated to dryness over a water bath, a frost-like residue appears which consists of trichotoxin and stearotoxin. The latter is removed by washing with alcohol, leaving the trichotoxin, needle-shaped crystals arranged in bundles. The crystals are permanent in air. Parker's experiments and theories have apparently not yet been confirmed or controverted by other observers.

Circumscribed baldness—alopecia areata—occurs in round patches in which the skin is smooth and somewhat depressed below the surrounding level, not from atrophy but becanse the hair roots have disappeared. This condition is ordinarily easily differentiated from ringworm of the scalp, the patches of which present stumps of broken-off hairs, in which can be demonstrated under the microscope the characteristic ringworm fungus. The cause of circumscribed baldness has been held to be nervous influences in many cases and it is frequently possible to find a neurotic factor, but the belief in the infectious nature of this disease is rapidly growing. Clinical evidence in support of this idea of the communicability of alopecia areata has been reported by Crocker, Pye-Smith[12], Besnier[13], Meklen[14], Brocq[15], Norman Walker[9], and Bowen [15]. In 1899 Bowen reported an epidemic, in which 63 out of 69 girls in one institution were infected from one original case. These cases and similar outbreaks reported by European observers would seem to establish pretty well the contagious nature of the disease.

The exact nature of the causative organism is not as definitely settled. Beginning with Bazin, in 1862, various observers have discovered as many different causative organismsm. Sabouraud (1887) holds that his microbacillus, which is also the cause of acne and oily seborrhea, is the active cause of alopecia areata. Robinson[17] and others had previously (1887) found cocci in masses and rows in the lymph spaces of the corium and sub-papillary layer and in the root sheaths of neighboring hairs. Sabouraud prepared a toxin from cultures of his microbacillus and by injecting it into guineapigs succeeded in producing a patchy baldness. However, notwithstanding the reported epidemics of alopecia areata, the occurrence in many instances of several cases in the same family, and the demonstration of microorganisms as the cause, still many dermatologists at the present time are not yet willing to concede that the disease is a contagious one.

Cure. To prevent baldness, we should really begin by selecting a good line of ancestors with heavy heads of hair and healthy scalps but, as this means of prophylaxis is somewhat impracticable, we must content ourselves with treating the heads of the present generation, in the hope that future generations may profit thereby. Attention to the hygiene of the hair is especially important for those who belong to families in which premature baldness is hereditary. Beginning with the new-born infant, the formed with oil and soap and, until the hair grows, the scalp should be lightly oiled daily.

The systematic use of the shampoo, begun in infancy and continued during childhood and youth, should be kept up and White's rule of a "shampoo not less often than once a month nor more frequently than once a week" is a good one. Those who are much exposed to dust should observe the lesser interval. Castile or tar soap or the spirit of green soap may be used. Of special importance is the rinsing of the hair afterwards in several waters to effect entire removal of the soap. If there be any tendency to dryness of the scalp, an oily preparation should be used after drying the hair. The scalp should be rather vigorously rubbed by the ends of the fingers but not with the nails. The fine-toothed comb should never be used on either infants or adults. The use of individual combs and brushes and their proper disinfection periodically are prophylactic measures worthy of attention.

Norman Walker, in discussing the contagious nature of alopecia areata, states that, while in day schools he would only advise that the affected child should not use the same hairbrush or towel as the others, should not exchange hats or play foot-ball, yet, if a case of alopecia areata were detected in a boarding school, he would have the child excluded as being a source of danger to his schoolmates.

In regard to the internal treatment of baldness, unless the patient's general health require treatment, as when for example some disturbance of the nervous, circulatory or digestive system is apparent and which should of course be treated by appropriate measures, there is probably no drug that is in any sense a specific. Good results have been claimed from the use of pilocarpin by stomach or subcutaneously in doses sufficient to produce its physiologic action of sweating.

If Sabouraud's contention, that his microbacillus, the acne bacillus, is the cause of seborrhea (dandruff) and baldness, be true, theoretically and by analogy inoculations with the acne bacillus should cure baldness. Recently (1909) Fleming[18], of London, reported the case of a woman, age 25, who suffered from comedones on the face and from a rapid loss of hair which had been persisting for some months in spite of ordinary treatment. She was inoculated with the acne bacillus and within a week this loss of hair practically ceased. She continued to receive inoculations every week or two and there was no recurrence of the loss of hair. Further reports of cases of this character will be awaited with interest. Fleming gives injections of five to ten million acne bacilli. It is now generally admitted that it is not necessary to prepare the vaccines from the lesions of each individual patient, a tedious and expensive process, as the stock vaccines are regarded as being equally efficacious.

If the parasitic nature of baldness be admitted, it follows that local measures for its relief should prove beneficial and this has been found to be the case by clinical experience. As has been previously stated, four-fifths of the cases of baldness have dandruff in either the dry or oily form as their chief etiologic factor. To remove the scales is the first essential and this must be done by sufficiently frequent shampooing of the scalp. As to the applications to be made to the scalp after it has been freed from all scales, their number is legion. A few of the most commonly used remedies are lotions containing quinin, cantharides, capsicum, pilocarpin, chloral, tartaric and salicylic acids, phenol, formalin, trikresol, anthrasol, croton oil or turpentine, and ointments containing sulphur, salicylic acid, zinc oxide, white precipitate, orthoform or borax.

White[1] uses practically only four prescriptions. They are an ointment containing 6 per cent. each of sulphur precipitate and salicylic acid:

℞

Acid. Salicyl.	
Sulph. Praecip. aa..........	ʒ ss
Petrolatum q.s. ad..........	℥ j

M. Sig. Apply at night. Shampoo with simple soap following day.

And three lotions:

℞

Pilocarpin. Nitrat...........	gr. j
Quinin. Sulphat.	gr. x
Tr. Canthrid.	
Tr. Capsici aa..............	ʒ iii
Alcohol (70%) ad..........	℥ viij

M. Sig. Wash for scalp.

℞

Acid. Tannic...............	gr. xxxv
Chloral....................	gr. xxvii
Acid. Tartaric..............	ʒ ss
Ol. Ricini..................	m. xv
Alcohol (70%).............	℥ vi

M. Sig. Wash for scalp.

℞

Hydrarg. Chlor. Corr........	gr. iv
Euresol....................	ʒ ii
Spts. Formicarum..........	℥ j
Ol. Ricini..................	ʒ i-ʒ iii
Alcohol (70%).............	℥ viij

M. Sig. Apply two teaspoonfuls in the morning.

White prefers euresol, the mono-acetate of resorcin, to resorcin which latter he considers an irritant to the scalp. This has not been the general experience. Euresol has the objection of being costly. Resorcin in lotions must be used with care on white or gray hair, as it is apt to discolor, unless due care is exercised to keep it off the hair. Other drugs will also cause staining. Other therapeutic measures of importance are massage of the scalp and the application of a faradic or static electric current several times weekly.

In the treatment of circumscribed baldness (alopecia areata) the conditions are somewhat different, and it must always be remembered that this disease tends to terminate by a spontaneous cure. Nevertheless the effects of active treatment are well established. The application of the high frequency current in sufficient strength to produce hyperemia is beneficial. Galvanic and static currents are also recommended. The same parasiticides are made use of in alopecia areata as in alopecia prematura. As the disease is frequently limited to one or a few patches, it is possible to use more powerful applications without causing an excessive amount of reaction. Such remedies are chrysarobin, corrosive sublimate or, perhaps best of all, the ninety-five per cent. liquid carbolic acid, or trikresol, as recommended by Bulkley. Norman Walker believes that lactic acid, 3 to 20 per cent. in alcohol, is the best application in these cases. The application of ninety-five per cent. liquid carbolic acid, not neutralized by alcohol, often produces very billiant results. The reaction may be somewhat intense but it is transitory and within two or three weeks a considerable new growth of hair often appears.

Of all cases of baldness alopecia areata forms less than ten per cent. Ninety per cent. belong to the class of ordinary or premature baldness. The treatment of this form gives, in the opinion of Sabouraud[19], mediocre results but not none at all, as many think. The cure of baldness does not exist in the sense of restoring the hair completely, but treatment of a seborrhoic scalp may retard for many years a baldness in process of extension.'' The prognosis depends very greatly on the age of the sufferer. The younger the patient the better is the outlook for arresting the falling of the hair and stimulating a new growth. Successful treatment depends on perseverance on the part of both the patient and physician, extending oftentimes over a period of many months, and this should be understood at the outset. The resulting improvement, disappearance of dandruff, the arrest of falling hair if not a new growth, is worth the time and trouble.

ANTITYPHOID INOCULATION.*

By J. E. Lane, M. A., M. D.

NORTH YAKIMA, WASH.

Typhoid fever has long been one of the greatest curses of armies in campaign, sometimes crippling their fighting efficiency to a greater extent than all other causes combined. In our Spanish war, for instance, there were 20,738 cases with 1,580 deaths, in a force of 107,973 men. It is, therefore, quite natural that most of the investigation of the value of prophylactic vaccination against the disease should have been made by medical officers, with the hope of finding some means of effectively protecting the men on the march and in hastily made camps, where sanitary measures are enforced with much greater difficulty than in garrison or permanent encampment.

It is also quite natural that the earliest reports of the use of the vaccine should have come from army surgeons. It is, however, rather remarkable that, in view of the large number of favorable army reports, so few physicians have used it, or at least reported their use of it, in civil practice. There are some reports from a few hospitals where the staff of doctors and nurses have been vaccinated, but that is about all. Reports of the work that has been done have been pretty generally distributed, so that it will be necessary to give only a very brief review of it.

Simmons and Fränkel immunized small animals to typhoid with small doses of living cultures in 1886. In 1892 Brieger, Kitasato and Wassermann found that immunity could be produced in animals by dead cultures. In 1896 Pfeiffer and Kolle inoculated two men with killed bacilli, as did Wright. In 1897 Wright inoculated 18 persons. In 1898 he inoculated 4,000 men in the British Indian Army, and in 1900 at the outbreak of the Boer War, about 100,000 men were inoculated with vaccine furnished by him. Some unfavorable reports led to the abandonment of the work, in spite of the lessened incidence of the disease. The German Colonial Army, in South West Africa, was partially vaccinated in 1904 to 1907.

In 1907 Leishman, of the Royal Army Medical Corps, showed that it was possible to prepare a much more efficient vaccine, and stated as his opinion that much of the earlier vaccine had been made inert by overheating.

In 1909 vaccination was begun in the U. S. Army through the efforts of Major Russell, who says: "At first volunteers were obtained with difficulty, and it was only through the loyalty of the medical officers in town, who came bringing their wives, children and servants, that we succeeded in arousing interest. In this way about 150 persons were vaccinated, almost all of whom became active missionaries in the cause. By the end of 1909 we had given 5,106 doses to 1987 persons.''

Since that time there has been no lack of volunteers. At the end of 1910 about one-seventh of the regular army had been vaccinated. At the time of the mobilization of the army on the Mexican border this year, over 17,000 soldiers had been vaccinated voluntarily. Vaccination was made compulsory for soldiers in the field, and the whole force on the border was vaccinated as rapidly as vaccine could be furnished.

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*Read before the Twenty-Second Annual Meeting of the Washington State Medical Association, Spokane, Wash., Sept. 5-7, 1911.

Results. The experiences with antityphoid vaccine prior to 1904 were less satisfactory than they have been since. Wright considered that, in the British Indian Army, the incidence of the disease was diminished by half. An estimate of about the same ratio was made for the German Colonial Army in South Africa. Here it was also demonstrated that, among those who had the disease, there was a very much lower death rate in the vaccinated, and a very much higher percentage of mild cases. It was also very well shown that three inoculations gave a much higher degree of immunity than one or two.

Results since then are much better, and Leishman's report of 24 regiments of English troops in India gives results covering observation of three and a half years to four months as follows:

	Inoculated 10,378	Not inoculated 8,936
Cases of typhoid	56	272
Deaths from typhoid	5	46
Case incidence per 1000...	5.39	30.4
Case mortality per 100 ...	8.9	16.9

This shows that cases in the unvaccinated were about six times as many in proportion as in the vaccinated, and the death rate double.

In our own army for the previous 18 months, Russell, at the end of last year, reported vaccination of 12,664 persons. "Among them there have been five cases of typhoid with no deaths. The first case was infected just before or after the first dose and came down with the fever soon after the second." All five cases were mild. "During the same period there have occurred in the remainder of the army 418 cases with 32 deaths. The rate per thousand among the vaccinated is 0.39, while in the army at large it is ten times as high. It is difficult to express the difference in percentages, since the army is a living body undergoing continuous change. Men are enlisted for a period of three years and nearly a third of the force is lost each year. In a general way I might say that about one-seventh of the army has been vaccinated and that five cases with no deaths have occurred among them. In the other six-sevenths of the force there have been, not thirty cases, but 418 with 32 deaths."

In the army on the Mexican Border, among 18,000 men, when the maneuvers ended on July 10, after four months in camp, there had been only two cases of typhoid, one in an unvaccinated teamster and one in a soldier who had had two inoculations.

An exceptionally interesting experience related by Foster, and frequently quoted, is worthy of being requoted in full:

"On June 14, (1910), ten days prior to leaving Washington Barracks for the Gettysburg maneuvers, 92 members of Company A, 1st Battalion of Engineers, received the first anti-typhoid inoculation. On July 6, 52 of the above men received the second inoculation and, on July 16, 51 of these received the third inoculation. Of the remaining 26 men of the command a few refused vaccination and others were on detached duty or temporarily absent when the first inoculation was given. Two of the 26 inoculated men gave a history of having had typhoid fever and, by virtue of that fact, may be considered immune. This leaves 24 men of the total strength of 118 men, who had not acquired an immunity to typhoid fever by either preventive inoculation or a previous attack of the disease.

On August 11, five days after the troops returned from Gettysburg, two of the uninoculated men developed typhoid fever and, between August 20 and 23, four secondary cases occurred, also among the uninoculated. Not a single case occurred among those who had received the preventive inoculations, while 25 per cent. of the nonimmune, living under exactly the same conditions, succumbed to the infection."

The chief reports on antityphoid vaccination, outside army circles, come from Massachusetts, where the work was done at the suggestion and under the direction of Dr. M. W. Richardson, of the State Board of Health. In that state inoculations were given in several hospitals for the protection of the nurses. For the ten years previous, at the Massachusetts General Hospital, two to six of the nurses had had typhoid each year. In 1909, in this and several other hospitals, nurses and attendants to the number of 405 were vaccinated, with the result that for that year no cases of typhoid developed in that hospital among the nurses nor among any of those vaccinated in any other hospital.

For some time North Yakima has been justly famous for its typhoid, and appeared at the beginning of the summer to offer a promising field for the use of antityphoid vaccine. An early outbreak brought people to the physicians with requests for its use and I expected to have a fairly large number of cases to report; but an unexpected awakening of public sentiment in regard to sanitation compelled a thorough investigation of the conditions and the appointment of a competent health officer, who was nominated unanimously by the medical society.

The County Medical Society had been for a long time trying to secure the appointment of a health officer who should have a salary sufficient to enable him to devote his entire time to the work, and sufficient funds to carry it on properly. This we finally succeeded in obtaining, and we selected Dr. Tetreau as the one of our members best fitted for the position. The wisdom of the choice has already been unmistakably demonstrated, and he has given an example of what sanitation can accomplish in a short time. His energetic work, greatly aided by the cordial co-operation of the State Board of Health, though it has in a way only begun, has so well succeeded, that since the 15th of June only seven new cases have developed in the city.

Last year there were 78 cases from June 15 to September first. Previous years have been about the same rate.

Consequently, as the results of cleaning the filthy spots became evident in the reduction of the number of cases of typhoid, and in the prevention up to this time, at least, of our usual summer epidemic, the enthusiasm for vaccination abated. Nevertheless, it seems to me that a sufficient number of inoculations have been given to be of some interest, especially as there has been some feeling that the procedure might be a more formidable one, in exacting private patients, than in able bodied soldiers.

We have vaccinated 118 persons. The earliest, only a few, were a little over a year ago, nearly all early this summer. Of these, 15 were given by Dr. West, at St. Elizabeth's Hospital, to the sisters, nurses and orderlies who had not had typhoid fever. The rest were given to private patients.

As so few cases of typhoid have developed in town since the majority of the inoculations were given, the fact that none of the vaccinated persons have contracted the disease is of little consequence except, perhaps, in the case of the nurses, among whom one or two contact cases had developed each year for the last three years. There have been several cases of typhoid in the hospital, and two cases developed in unvaccinated patients during the summer.

Dose and Technic. At first there was considerable difference among those who used the vaccine as to dose and number of injections, but experience has now brought about uniformity of opinion as to the method that gives the best results. Three injections are given at intervals of ten days. The first dose is 500 millions, the second and third are one billion. The injections are given subcutaneously, and the arm over the insertion of the deltoid is the location most convenient and most frequently used. Painting the skin with tincture of iodine is adequate sterilization.

Local Reaction. There is slight pain for a few minutes after the injection. After four or five hours there begins to be slight soreness and often some bluish discoloration of the skin at the point of the injection. The swelling is usually slight, covering an area of a diameter of two inches or so, and is rarely painful, even in the few cases in which the whole arm swells and the axillary glands enlarge. The swelling and tenderness disappear in two or three days. There is frequently left a small indurated mass that disappears in a week or two.

Russell reports no abscess in 34,284 inoculations. I have not been so fortunate. In one or two of my earlier cases I had induration that persisted for a month or longer. In one case all three injections left indurations that have persisted for five months. One of the three, after four months, developed into an abscess, which a culture showed to be sterile. The reason for the persistent indurations and abscess was that I was not careful enough in getting the fluid into the subcutaneous tissue, but got a little in the skin itself, where it is much more irritating. All of these indurations were in persons having little subcutaneous fat. Since then I have been more careful, and have had no trouble, frequently using the abdomen or upper part of the thigh for the seat of injection, if the arm is not very well supplied with subcutaneous fat.

General Reaction. Of the general reaction Russell says that it is not nearly so uniform as the local reaction. "Occasionally it begins in thirty minutes to an hour after inoculation, although in the great majority of instances no symptoms appear until after five or six hours. The principal symptoms are headache and malaise and, although they may be extremely mild, they are rarely absent. All general reactions have been grouped in four classes: If the temperature be 103° or over, the reaction is classed as severe; if between 100° and 103°, moderate; if above normal and below 100°, as mild; if no temperature be noted, the reaction is considered absent unless the man complains of headache and malaise, when it is classed as mild.

The cases of mild reaction and no reaction together make up 95 per cent. of all reactions recorded. The moderate and severe reactions make up the remaining 5 per cent. The severe reactions are so infrequent as to make up less than one-half of one per cent. of the total." (Partial quotation.)

In our cases the great majority had no reaction worth mentioning. One reaction would be classed as severe, the patient, a woman, being confined to the bed for a day with a temperature of 103°. Two had moderate reactions, one of them, a woman, being incapacitated for twelve hours, and the other, a man, having slight chills and rather severe headache for a couple of days. In my personal cases no one felt sick enough to consult me, although they had been warned to do so if they felt very uncomfortable.

As the reaction comes on four or five hours after the injection, it is a good plan to give it late in the afternoon, so that it may come when the person is not actively engaged in work. It is well to take the temperature before giving the injection, as the reaction is likely to be more severe if the patient is not feeling well at the time. For this reason the menstrual period is usually avoided, though I gave it in two cases without any noticeable effect; once by accident, not having asked about it; the other time at the request of the woman, who said she usually was in bed at that time and she would prefer both discomforts at the same time, in case the vaccine should give her any.

One or two cases reported more discomfort when they took a little alcohol after the injection, and one reported no difference. It is well to advise refraining for a day or two.

The Widal reaction appears in a few days after the injection, often in high dilution, being most marked after the third dose. It persists in most cases for about a year. This is a point not to be neglected in making the diagnosis of typhoid following the use of the vaccine. A Widal should be made early in the sickness to ascertain whether it still persists from the vaccination. If it be negative, and becomes positive later, we can be certain that we have typhoid to deal with. If it be positive, the diagnosis should be settled by a blood culture which in any case is the better way, if accessible.

Antityphoid vaccination has been used for some time in the English Army, the German Army and the U. S. Army. It has recently been adopted in the French Army, and in the U. S. Army it has just been made compulsory. It has been used in a number of hospitals and it is used to some extent in private life among the English residents of India. All the physicians who have used it largely are convinced that it has great phophylactic value.

However, we can hardly take the figures of results as quoted to prove that the lessened typhoid incidence, where the vaccine has been used, is wholly due to it. That there has been little typhoid in the army on the Mexican border, in comparison to the amount in the Spanish war, is no doubt largely due to better sanitation. There has been more time for the preparation of camps, there have been fewer temporary camps and there were fewer raw soldiers in the field.

Another point that no doubt has some importance in the interpretation of the statistics is the fact that up to this spring all vaccinations were voluntary. It would be expected, and is no doubt true, that those who would volunteer for vaccination are the more careful men, and ones who of their own accord take such other precautions as they know to avoid the disease. These things are no doubt factors in the statistics; of how great importance we cannot estimate even approximately. But allowing these factors to be considerable, we cannot well avoid the conclusion that there is a very great protection acquired by the use of the vaccine, and that there is no danger, and very little chance of much discomfort, attending its use.

One point still unsettled is the length of time over which the protection extends. The general opinion now seems to be that it is pretty strong for at least two years and then gradually grows less.

Where our civil population is sufficiently well protected by good sanitation to make typhoid a rare disease, there is little need for considering vaccine. Unfortunately there are a great many places where this is not the case. The death rate from typhoid in the United States as a whole makes a very poor showing, when compared with that of other civilized nations. The typhoid fever death rate per 100,000 inhabitants in recent years has been 6.2 in Scotland, 7.6 in Germany, 11.2 in England and Wales, 16.8 in Belgium, 19.9 in Austria, 28.3 in Hungary, 34.8 in Spain, 35.2 in Italy, 46 in the United States, and in Washington for the last 3 years about 30. Not particularly high, but in four counties it was over 65, and in two over 100. In some parts of the state the rate is reasonably low, but in many places it is so high that the inhabitants prefer to talk on any other subject. In most of such places the fact is perhaps explainable by the extremely rapid growth of our population. A good sized town springs up before any such thing as sanitation is thought of by the inhabitants.

We need better sanitation everywhere, but a considerable length of time must of necessity elapse before we can possibly have even tolerable sanitation an established fact throughout the state. In the meantime, if we can somewhat decrease the chances of the individual contracting the disease in places where it is prevalent, we shall be accomplishing a little. We cannot inoculate the whole population;—a considerable number of them still prefer smallpox to vaccination,—but we can inoculate a goodly number, if we consider it worth while to mention the subject occasionally.

The results of antityphoid inoculation are sufficiently well established, it seems to me, to warrant our urging its use by all persons, who have not recently had typhoid themselves, who come in contact with patients suffering with the disease. Especially should it be urged in the case of those nursing a patient, and in the members of the family in which a case develops. Four out of the seven cases that developed in North Yakima since June 15, were in persons closely associated with patients having the disease, and were undoubtedly contact cases that might have been prevented, had the vaccine been used.

Furthermore, in places where there is an epidemic, it should be recommended to all persons who wish to take all reasonable precautions against the disease. This class is larger than one might imagine. The reports of army vaccination have been widely circulated by the press, and in the face of an epidemic any physician who is known to be ready to use the vaccine will have a number of inquirers, who will readily submit to its use when its status is explained.

However, in civilian communities, inoculation is only an aid in the prevention of typhoid. Good sanitation is the remedy, and we do not desire to retard that by any means. I feel sure that any number of inoculations will not engender any feeling of security that will lead to the neglect of sanitary measures. On the contrary, the result may perhaps be to stimulate somewhat the demand for the enforcement of such precautions as will make its employment unnecessary.

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THE FALLACIES OF CLIMATE IN THE TREATMENT OF TUBERCULOSIS.*

By Ray W. Matson, M. D.,
PORTLAND, ORE.

Perhaps no factor in the treatment of tuberculosis is more exaggerated in the minds of the laity and profession in general than that of climate. "It is not many years when it seemed necessary to send the patients to a climate heralded for some specific quality, and a relaxing climate like Madeira was the favorite choice; then came the inland climates and later the tonic and stimulating effects of the dry cool air of the Alps and the Rockies; and more recently still has come realization that tuberculosis can be treated successfully in any locality," (Barlow, 1909).

Some recognized authorities even go so far as to deny the value of any climate. Flick, 1906, hold that "there is absolutely nothing in climate in the treatment of tuberculosis" and the same author states (1910 Hare), that he doubts very much whether there could be improvement upon the common sense opinion expressed long ago by Austin Flint that his studies seem to lead to conclusions at variance with the prevailing popular and professional belief in special climatic influence. In the first place, Flint stated, "it does not appear from the analysis of my cases that changes of climate have in a marked degree a beneficial influence as compared with the hygienic measures at home."

Landis writes that the selection of a suitable climate may be done in a few instances, but for the great majority of patients this may be disregarded entirely. In the minds of many people it is still the first thought that on the detection of consumption, he must at once be sent away. "This deep rooted idea of the necessity of a change of climate is erroneous on the very face of it. I can assert that in no single instance was the progress of the disease distinctly effected by the change." (Burton-Fannig, 1908).

It has been our experience that for patients doing badly at home removal to a recognized health resort did not succeed in arresting the downward progress of the disease. On the other hand, I have known the change to hasten the fatal issue.

C. L. Minor, E. R. Baldwin, and others (*Medical News*, Nov. 11, 1905) state that "one of the reasons why the value of climate is doubted is because of the formerly wide-spread belief in its specific influence, leading to a superstitious faith in its unaided powers and, therefore, to a neglect to those even more important matters—hygiene, diet, instruction and detail supervision. The old idea that there existed certain spots on the globe where the climatic conditions conferred a certain immunity against tuberculosis is absolutely false. Tuberculosis is said not to have existed on this continent or in Africa before the invasion of the white man. Its absence, however, could not be attributed to any immunity or protection afforded by any climatic condition, but to the open air life which was led, and the now frightful mortality from tuberculosis in these races can only be accounted for by the hygienic and social conditions under which these people live.''

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*Read before the City and County Medical Society, Portland, Ore., Dec. 21, 1910.

Tuberculosis was thought not to exist in the beautiful Alpine vales but it was found rife among the Swiss watch makers inhabiting these regions. The pure, dry mountain air of Colorado was supposed to have more or less immunizing properties and the people who lived in these altitudes were considered to be more or less protected against tuberculosis but this is not true. The mortality statistics of the Denver Board of Health for the year 1898 shows that nearly one-fifth of the deaths from tuberculosis occurring in this city during this period were specified as having been contracted in Colorado. For evidence of the superstitious faith in the healing properties of climate, one need but visit the burial ground in the little town, Davos Platz in far away Switzerland, where small white slabs mark the termination of many a desperate struggle with the dreaded foe, and bear mute evidence of long journies from distant lands, separation from friends and dear ones in the hope of deriving alleviation through some magic climatic influence in this very acme of resorts.

The mortality statistics of the U. S. Census Bureau, 1906, shows that the annual death rate in the large cities of the United States from tuberculosis of the lungs, 1900-1904, was highest in Denver (410.1). The excessive mortality is due to nonresidents who resort to this locality in the later stages of the disease, hoping to be benefited or cured by the climatic conditions. The report continues. ''It may be anticipated that the growing knowledge of the fact that in pulmonary diseases the benefits supposed to be derived from a change of climate are really due to a change of habits, through which a much larger proportion of time is spent in open air and sunshine and that by the same means, aided by diet and rest, incipient cases can be successfully treated at home, will hereafter cause a decrease in the mortality from tuberculosis in those places in which for reasons stated it has been excessively high.''

I do not wish to depreciate the efficacy of climate in certain cases, other conditions being equal, but the cases actually requiring a change are few and far between. As a matter of fact, little more than is gained by a change of scene and environment is obtained in any case, and many are sent away much to their detriment. The indiscriminate practice of starting a patient off on a long fatigueing journey to some unknown, distant resort the moment the diagnosis of tuberculosis is made, is reckless and should be discouraged. The physician should be informed concerning the best methods of utilizing home climate, but he must realize that even a good climate alone is of little value. No advanced workers in this line would today, as was formerly done, place climate first in the order of therapeutic measures. Let it ever be remembered that success is not a matter of fine weather, high altitude, or dry soil but strict and faithful compliance to the principles of the treatment which must be carried out with the exactness of military discipline.

If for any reason treatment at home is not practicable, if business worries, domestic cares or other obstacles arise which make treatment at home seem unwise, the physician should exercise judgment and individualize his cases if success is to be attained. He should, at least, have some knowledge of the place to which he sends his patient, especially regarding accommodations, expense and the medical fraternity. ''Most resorts are like big sanatoria where all kinds of chronic invalids and hypochrondriacs are treated by as many kinds of cranks and where quacks and charlatans eke out a good living'' (Barlow, 1910). They infest these resorts like pick-pockets do a circus.

It must be borne in mind that care in the best sanatoria at resorts is expensive, varying in price from $100.00 to $200.00 per month. Thus only the well-to-do are able to avail themselves of this luxury. Patients cannot hope to be admitted to the part pay or free institutions, because certain regulations, together with long waiting lists, make such places unavailable. Consequently the uninformed patient usually takes up his abode in any one of the innumerable boarding houses or hotels, occupying the same room and perhaps the same bed vacated by the former tuberculous tenant. While it is true attempts have been made to regulate most resorts, it is also true that all measures to control infection are inadequate. In all open resorts where consumptives live enormous quantities of tubercle bacilli are expectorated. One cannot deny the increased dangers of exposure. This danger is well exemplified by the records of the Denver Board of Health, covering years from 1893 to 1898, during which period it is shown that the percentage of deaths from pulmonary tuberculosis in that city, those specified as having been contracted in Colorado, rose steadily from 11.26 to 19.77 per cent.

It has been urged that the rainfall of winter is detrimental to the treatment of tuberculosis in this climate. This objection however, is more apparent than real. A glance at the weather bureau statistics shows us that the annual rainfall in Portland is not greater than that of some Eastern cities and resorts famed for the treatment of this disease. Aside from the mental depression accompanying a rainy day, rain cannot be said to influence in any other way the course of the disease. On the other hand, rain is rather advantageous, for it is a most powerful agent in purifying the air by carrying down to the earth the germ-laden dust particles. Regions that have frequent rains have a pure and clean atmosphere.

Were fine weather an essential for the cure of tuberculosis, the remarkable success of the sanatoria in the Black Forest and the favorable results recorded by Josselin de Jong in the low lying districts of Holland would never have been recorded. The sanatoria of the Black Forest have a moist, chilly and foggy atmosphere during the greater part of the year, yet the results are rather better in winter than in summer.

Falkenstein has become famous because of the location at this place of Detweiler's sanatorium. Yet there is nothing remarkable about its climate, only half of the days of the month being sunny, but the atmosphere is pure and free from dust which, according to Detweiler, is the chief essential, and his patients spend from seven to eleven hours daily in the open air, in spite of the rain, fog or snow. Even Detweiler himself has remarked that it is not so much the climate but the method. Tuberculosis can be cured in any climate.

If for a cure of early tuberculosis a change of climate were necessary, the globe would be depopulated in less than a generation. Tuberculosis is the most common of all diseases with which it is safe to say all of us at some time in our lives are affected. The postmortem findings of the largest municipal hospitals show that fully 50 to 90 per cent. of the bodies of all adults exhibit evidences of this disease and, since it is not responsible for more than 15 per cent. of all deaths, fully 35 to 75 per cent. of the persons so afflicted must recover. It should be realized that the material upon which these statistics are based is derived mostly from the charitable institutions in the large cities, and does not represent the prevalence or curability of this disease in the better classes, and that recoveries here took place under the most adverse conditions, even in the very heart of most populous centers, the cases often arising and healing without the patient's knowledge of its existence, the temporary impairment of health being attributed to overwork, being run down, debility, etc.

It was formerly the practice among many of our patients to go South during the rainy season but in not a single instance have we been able to determine any advantage in the change. Cases doing nicely here did not improve more rapidly, and cases doing badly usually continued the downward progress. Our patients do fully as well in winter as summer, and many feel much better during the winter months.

The modern consensus of opinion tends to the view that tuberculosis should be treated in the same climate in which the patient must spend his subsequent life, after restoration to health. "The cure at home is likely to take a little longer, but the patient's chances for remaining cured are better." (Knopf, 1909). It has been shown that no amount of rain will cause even the most delicate person to chill, provided he be accustomed to the open air life. Patients who go South to avoid the winter attack of bronchitis gain nothing in the way of protection against subsequent infections, and colds are contracted with equal ease upon their return home. If these patients slept in the open air, were dressed and nourished properly, and accustomed themselves to exposure, they would soon become so acclimated that then and only then would the tendency to bronchitis disappear. The infrequency of bronchitis among our cases can be attributed only to these circumstances.

Let me suggest in conclusion, that the people be educated to know that tuberculosis exists wherever treads the foot of man; that it is curable in any climate; that there exists no specific climate; that the sole climatic requisite is pure air and plenty of it. Those who are unable to go away should be comforted with the assurance that their recovery is not prejudiced by their remaining at home. The professional or the business man afflicted with tuberculosis should realize that at least a portion of his time should be devoted to his health, that by proper regulation of his work, diet, rest and exercise, absence from business and a monotonous existence upon the desert would be avoided.

Physicians should appreciate that it is in the early stages of the disease that the patient's chances for recovery are greatest, and if ever guidance, supervision, instruction and care are required it is in the very beginning of the disease. The patient should not be allowed to wander the earth seeking an Eldorado in climate, and to tell a patient with active tuberculosis to go up into the mountains and "rough it" is nothing short of criminal. Many of those who survive the treatment present a pitiful spectacle upon their return home to family and friends, the disease being often hopelessly advanced and the patient has been robbed of all chances to recover.

1021 Corbett Bldg.

NORTHWEST MEDICINE
The Journal of the State Medical Associations of Oregon, Washington, Idaho and Utah.
Devoted to the Interests of the Medical Profession of the Pacific Northwest.
Editorial Office, 719-22 Cobb Building, Seattle, Wash.
OCTOBER, 1911.

EDITORIAL

L. L. LOVE, M. D.,
Tacoma, Wash.
President Washington State Medical Association, 1911-1912.

RICE DIET AND BERIBERI.

It has been known for a long time that beriberi resulted from an exclusive rice diet. As early as 1896 experiments with fowls demonstrated that polyneuritis would result in birds that were fed on polished rice but would not follow a diet of unhusked red rice. Two years ago it was proven beyond doubt by the experiments of Fraser and Stanton on Malay laborers that beriberi could be prevented by feeding parboiled rice and that it would occur under similar conditions, if the men were given polished rice. Further it has been demonstrated that the same prevention is found in undermilled rice and that the beneficial results are due to the adherent pericarp and aleurone layer and not to the process of curing. It is now thought by many that beriberi results from phosphorus privation, which is an ingredient of the pericarp, and that the phosphorus content is a good guide in the selection of a beriberi-preventing rice. Experiments in the office of the Surgeon General of the Army on different kinds of rice have demonstrated there is a great difference in the phosphorus and potassium contents of the polished and unpolished samples, the latter having twice as much phosphorus and two and one-half times as much potassium.

In order to determine the effects of various Philippine rices on fowls and to use the knowledge thus acquired in the selection of a proper rice for the native troops, Chamberlain, Bloombergh, and Kilbourne conducted a series of experiments on fowls, covering a period of nine months, as reported in *The Philippine Journal of Science.* It is a question of debate whether the polyneuritis of fowls is strictly analogous to beriberi in man, but experiments have been conducted with the former by many investigators, since the disease is so easily produced in these birds. These experiments found that all birds fed on polished rice alone sooner or later developed the disease. It was discovered that, when phosphorus and potassium were added, there was no decrease of mortality, some of the fowls even dying sooner than when they were fed the rice alone. In another group of experiments fowls were fed on two kinds of unmilled rice, none of whom developed the neuritis. Then arose the interesting discussion as to the factor in the disease played by starvation, since the neuritis was delayed in all cases until a certain grade of emaciation developed. It was questioned whether starvation alone would induce the disease. This was proven to be true in the case of some fowls which were fed simply reduced quantities of neuritis-preventing rice. Others were fed nothing but water, in whom the fatal neuritis developed in due time. It was also noted that fowls living alone on polished rice, whose appetite was maintained so that they ate a large quantity over an extended period, were late in developing neuritis. Their conclusions are that, while they agree that polyneuritis gallinarum and beriberi are not identical, the capacity for producing polyneuritis in fowls is an accurate indicator of the beriberi-producing quality of rice; and that a low phosphorus content is a reliable index of the dangerous character of the grain; but they found also in the neuritis-producing rice that the potassium is even more reduced than the phosphorus. Their inference, therefore, is that neuritis in fowls and beriberi in man are just as likely to be due to deficiency in salts of potassium as to deficiency in salts of phosphoric acid. C. A. S.

FALLACIES CONCERNING ULCER OF THE STOMACH AND DUODENUM.

Ninety per cent. of stomach troubles originate outside the stomach. This ninety per cent. may roughly be divided into thirds. One third includes the neuroses associated with gastric atony and prolapse; another third comprises the stomach troubles caused by general diseases, as anemia, heart and kidney disorders, tuberculosis, arteriosclerosis, locomotor ataxia, etc.; the remaining third embraces the stomach troubles produced by disease of the digestive tract outside the stomach, as by gallstones and appendicitis. Finally, there is the remaining ten per cent. consisting of actual lesions of the stomach itself, as ulcer and cancer. The subject of ulcer is most confusing in the text-books. There usually is described the acute, round ulcer of chlorotic young females. This is comparatively rare at present owing to better living but is commoner abroad. Round ulcer is apparently due to some toxic condition and is allied to those acute ulcers and fissures which occur in liver cirrhosis, Banti's disease and morbid states of the blood. Acute ulcers can not be demonstrated on external inspection of the stomach and they commonly heal in a few weeks under medical care. Ulcer as we are able to recognize it in real life is more often the chronic, indurated ulcer of the pylorus and duodenum. Chronic ulcer is three times more common in men than in women and duodenal is twice as frequent as gastric ulcer. Thus are two fallacies exploded. Food does not cause pain in ulcer, but relieves it. Pain is most severe in two to four hours after eating. In ulcers of the fundus, comprising but ten per cent. of all ulcers, pain occurs soon after food and this does not give much relief. Ulcers commonly begin in young adult life with gastric distress and belching of sour, burning, bitter fluid which is relieved by eating. The attacks last for weeks and are followed by complete remission of weeks, months or even years. As time goes on attacks are more frequent.

There are no pathognomonic signs of ulcer. Hemorrhage is the least certain. A single hemorrhage without a previous ulcer history is not significant of ulcer. With such a history it is almost conclusive. Hemorrhages without ulcer history are due to cirrhosis, heart disease, Banti's disease, unknown toxic causes, gallstones, etc. Hypersecretion and hyperacidity are characteristic only in the early stages, with regurgitation of sour, burning, bitter fluid accompanied by pain, gas, nausea and vomiting. The one most diagnostic feature is pain occurring with great regularity at a constant time after food, as one to four hours after eating, with belching of sour, bitter, burning fluid and relieved by vomiting, irrigation, food, drink or alkalies. This is the ''hunger pain'' and a diagnosis is immediately suggested when patients take a cracker, cookie, milk or soda water to bed with them to eat the moment the pain awakens them at a regular hour in the night.

Seventy per cent. of ulcers are cured by medical treatment, according to Bamberger. Dr. Wm. Mayo has operated on patients, as a rule, after they have had nine permanent medical cures and he states that the average duration of ulcer before operation is twelve years. It is common but surprising to see the deep indurated ulceration in patients when they are operated upon during long periods of perfect apparent health. It is doubtful if chronic ulcer ever heals. The common advice, that uncomplicated ulcer should not be operated upon (Aaron), reflects the purely medical mind which has a natural aversion to the knife. Why wait for complications as hemorrhage, cancer and perforation when the best operators have a mortality of less than two per cent. and a percentage of cures or marked improvement in ninety-eight per cent. of cases (the Mayos). About sixty per cent. of cases of gastric cancer have a history of ulcer (Graham) and seventy per cent. of gastric cancers removed by gastrectomy show development on an ulcer base (Wilson). In view of these facts is not operation a rational procedure, providing two or three ''permanent'' medical cures have been performed without relief and the diagnosis is reasonably certain, and the operator is of the best. Medical procrastination is the bane of surgery. K. W.

THE MEETING AT SPOKANE.

Why was the Washington State Medical Association meeting at Spokane this year so poorly attended? Why have all the meetings of the last four or five years been so poorly attended except, perhaps, that of last year at Bellingham? For the same reasons that other state meetings and those of the A. M. A. are not better attended. But what these are can only be surmised. One reason goes without saying, that is, the physicians of this state are not interested; if they were, they would attend. Some cannot afford to go, but there are enough who can to furnish an attendance of three or four hundred instead of forty or fifty, provided they were interested. One prominent physician of Seattle when asked why he did not go, said ''What would I want to go to one of those things for?'' and, to show that he was voicing the sentiment of most of the remaining Seattle profession, there was the magnificent number of nine at the Spokane meeting, out of a membership in the King County medical society of over three hundred and twenty-five. We trust those who did not attend are in a position to ignore their state and county meetings. Beside those who could not afford the trip, many did not go for the reason that they feel themselves more important than their meeting. Others are completely indifferent and some, not many, are so busy chasing the almighty dollar that they are afraid to let the man have one who could not afford to go. The meeting was a success and some good will come from it if important members were not there. We wonder if the Seattle surgeons and those engaged in other special work can get any comfort out of the good attendance of Portland men and we wonder what spirit prompts us to stay away while they attend. These are matters which concern every one and one who is not interested in the welfare of his state organization is in a very precarious position as regards his usefulness as a physician.

The House of Delegates passed a resolution to expell any member found guilty of secret fee-splitting. Of course this only covers a contingency, for no one in Seattle, Tacoma, Spokane or elsewhere ever did such a thing. Perish the thought that any physician would "job" the sick. No, never, at least for less than 50 per cent. of the fee. Is it any wonder that Pierson's Magazine published such an article and more than true every word of it. How physicians expect to talk about ethics when their state associations find it necessary to pass a threatening resolution regarding a dirty practice of fee-splitting passes all comprehension. Of course not all surgeons split fees; some are too honest and some do not get any, but evidently someone in this land of honor and bravery is doing it, hence the resolution. The very shame of it should make us blush.

The next meeting should be held in Portland as a tri-state meeting with Oregon and Idaho. Such seemed the sentiment, although a different action was taken. The President for the ensuing year will without doubt rescind this action in a special meeting of the trustees at an early date.

H. M. R.

THE WASHINGTON STATE BOARD OF HEALTH.

Last month Dr. Elmer E. Heg resigned as secretary of the State Board of Health after having served in that capacity for a period of eight years. This is, therefore, an opportune occasion to review the work accomplished by this board and to call attention to its present degree of efficiency, reached chiefly through the untiring labors of the secretary, which have been endorsed and sustained by the board. Previous to his assuming office the work of the board had been done in a perfunctory manner and the secretary was very largely a figurehead, little of substantial results being accomplished by this department. At that time the legislature was accustomed to appropriate about $2,150 for the biennial expenses of the board. The last legislature assigned $35,000 for the work of the next two years. A great change has been made in the matter of obtaining vital statistics. Formerly they were gathered by the county auditors who kept records of births and deaths which were collected once in three months. These records were mere summaries and not lists of individual items. Since no penalty was enforced for failure to make reports these were very imperfect and unsatisfactory. In 1907 the present vital statistic act went into effect. In six months the reports of deaths were doubled, with almost the same increase for births. The record soon reached a degree of efficiency which the census department declared to be over ninety per cent. in collection of deaths reported, and this state was admitted to the registration area. At present the efficiency in births is fully ninety per cent. In the former days nothing was done in the way of public sanitation, contagious diseases being only controlled by city ordinances. Outside of city limits these diseases could not be quarantined. At present all quarantinable diseases are quarantined both in the cities and counties. At that time there were only four county health officers and a few county physicians who did no health office work. At the present time all of the thirty-nine counties of the state have health officers, beside county physicians in some of them and about one hundred and eighty incorporated cities and town have health officers. All local health officers make monthly reports to county officials who in turn transmit their reports to the State Board of Health. In the former period Seattle alone paid anything like an adequate salary for the services of a health officer. Now two cities pay their health commissioners salaries of $5,000, and several others pay $150 or more per month. The results obtained by this board have reached such a stage of thoroughness that it is recognized by other states as being one of the best workable board of health organizations in the land.

C. A. S.

WASHINGTON MEDICAL PRACTICE ACT SUSTAINED.

Every one interested in the secure establishment of satisfactory medical practice acts will receive with interest the recent decision of the Washington Supreme Court which confirms the constitutionality of the medical law of this state. In March of this year Mathilda Greiner, of Seattle, was convicted in the justice court of practising without a license. The medical practice act states that any one employing any method of treating the sick or afflicted, who does not possess a valid, unrevoked license, is practising illegally. The defendant stated that she was practising "chiropractic" and was not guilty of treating her patient because she used "adjustments" and, therefore, was not guilty of violation of the statute. She was convicted, however, of practising illegally. On appeal to the superior court this judgment was affirmed. The Supreme Court has now likewise decided against the defendant. In its decision the court states that the plea of using adjustments is a mere play of words and that she was clearly guilty of treating the sick and afflicted as defined in the statute; furthermore, she used a vibrator, diagnosed the case and collected a fee, all of which brought her clearly in the position of practising illegally in the absence of a license from the board.

An equally important feature of the decision was on its constitutionality. It was claimed the law was unconstitutional because it embraced more than one subject and that the science practised by this woman was not subject to regulation by statute. The court decided that the legislature is qualified to enact legislation regulating the treatment of the sick and afflicted, and that any method or science which is aimed to accomplish this end falls within the scope of the law. It is a great satisfaction to have had a decision of the highest court of the state on the constitutionality of this act. Supported by this decision, it should not be difficult to eliminate illegal practitioners from the state. This decision is sufficiently comprehensive and practitioners who are plying their trade without the possession of qualified licenses should be promptly apprehended and be made to suffer the penalty of the law.

C. A. S.

THE ANNUAL MEETING OF THE IDAHO ASSOCIATION.

The annual meeting of the Idaho Association will be held at Boise, Oct. 11 to 13. This particular date is chosen, because it falls in the week of the "Rainmakers Festival and the Intermountain Fair." The promoters of this fair state it will be the biggest thing of the kind ever given in the Northwest. All sorts of features common to such fairs and festivals will be presented, beside a lot of new things that have not been seen at any other fair. Visitors to the association meeting can take advantage of the reduced rates in effect for the advantage of this fair. It is hoped there will be a large attendance from the Idaho physicians and a cordial invitation is extended to the physicians of adjacent states.

One feature of the program will be the attendance and an address from Dr. J. M. McCormack, of Kentucky, who is making a pilgrimage through the West for the benefit of the medical profession as well as the laity. The program for the meeting is as follows:

1. Principles of Specific Therapy, Frank Hinman, Spokane.
2. The Pituitary Body and its Importance to the Surgeon, A. C. Behle, Salt Lake City.
3. Exophthalmic Goitre, H. Goodfriend, Albion.
4. Medical Inspection of Schools, George E. Hyde, Rexburg.
5. Problems in Sanitation in the Indian Field Service, J. E. Dougherty, U. S. Indian Service, Desmet.
6. The Importance of Intestinal Rest in Dealing with Acute Intestinal Conditions, R. C. Coffey, Portland.
7. Brain Tumors, with especial reference to Diagnosis, William House, Portland.
8. Some of the Phases of Modern Treatment of Tuberculosis, E. A. Pierce, Portland.
9. Serum Treatment of Tuberculosis, Ray Matson, Portland.
10. Therapeutic Pneumothorax, J. Chris O'Day, Portland.
11. The Science of Life. Whence is it? What is it? Mary E. Johnston, Boise.
12. Rupture of both Chorioid and Retina with Subsequent Development of Retinitis Proliferans, Jesse K. Clarke, Lewiston.
13. Wassermann Reaction and 606, Mathew A. Reasoner, Med Corps, U. S. A., Vancouver Barracks.
14. Some Case Reports, W. F. Howard, Pocatello.
15. Goitre. E. F. Root, Salt Lake City.
16. Subject not announced, W. T. Williamson, Portland.
17. Subject not announced, C. L. Dutton, Meridian.
18. Address, J. M. McCormack, Bowling Green, Ky.

E. E. M.

THE ANNUAL MEETING OF THE UTAH ASSOCIATION.

The annual meeting of this association will be held at Salt Lake City, Oct. 4 and 5. A large attendance is expected at this annual meeting which will contain many features of interest, in addition to the presentation of scientific papers. Dr. McCormack will address the association at one of its sessions. The papers to be presented are as follows:

1. Foreign Bodies in the Orbit, L. W. Snow, Salt Lake.
2. Tonsillotomy or Tonsillectomy, Which? Fred Stauffer, Salt Lake.
3. Infections of Maxillary Antrum and Appliance for Drainage, H. VanCott, Salt Lake.
4. The Relation of the Eye to Systemic Functions, David H. Lewis, Salt Lake.
5. The Use of the Cystoscope in Diagnosis, O. S. Fowler, Denver.
6. Toxemia of Pregnancy and Eclampsia, J. O. Evans, Salt Lake.
7. Infantile Pernicious Vomiting and Rectal Hemorrhage, Anna Ries Finley, Ogden.
8. The Bacteriology of Diphtheria, R. W. Ashley, Salt Lake.
9. Paranoia, D. H. Calder, Provo.
10. Resection of Posterior Spinal Nerve Roots, for Spastic Paralysis, E. Viko, Salt Lake.
11. The Business Side of Medicine, R. S. Joyce, Ogden.
12. Trifacial Neuralgia and its Treatment, A. A. Robinson, Ogden.
13. The Surgical Treatment of Cleft Palate, D. C. Budge, Logan.
14. The Knee Joint, A. J. Hosmer, Salt Lake.
15. Congenital Dilation of the Colon (Hirschsprung's Disease), J. F. Critchlow, Salt Lake.
16. Congenital Stenosis of the Pylorus, R. C. Smedley, Salt Lake.
17. Surgical Treatment of Congenital Hypertrophic Stenosis of the Pylorus, Ralph T. Richards, Salt Lake.
18. Eye Strain Among Public School Children, Edgar Bates, Ogden.

W. B. E.

PERTAINING TO OUR JOURNAL.

The board of trustees of Northwest Medicine held a meeting in connection with the Washington State Association meeting at Spokane last month.

They elected as associate editors for Oregon, O. B. Wight, of Portland, and A. E. Tamiesie, of Salem. W. H. Carithers, of Moscow, Idaho, was elected in place of Joseph Aspray. M. B. Marcellus, of Portland, is the assistant editor for Oregon by virtue of being the Secretary of his State Association. The Washington Association elected as journal trustees, Wilson Johnston, of Spokane; J. R. Brown, of Tacoma, and W. F. West, of Everett. The trustees recommended the publication in the journal of more complete reports of the meetings of the medical societies. In order to meet this recommendation it is necessary that the secretaries send reports of their society meetings to the journal. These should be on hand by the 25th of each month, and it is urged that they be sent with regularity. The journal management will take pleasure in publishing such monthly reports as are thus received. It was also recommended that more attention be paid to medical news items. In order to get interesting matters of information the journal will need the assistance of any of its readers possessing information of value. Anything of this nature that is received will be incorporated in the monthly publication. C. A. S.

DR. McCORMACK'S TOUR OF THE NORTHWEST.

During the past few weeks Dr. McCormack has visited the cities of the Northwest, making one of his periodical tours for the propagation of peace and harmony among the physicians, and for spreading the gospel of preservation of health and fostering sanitation among the general public. In this tour he has visited the leading cities of Oregon, Washington, Idaho, Wyoming and Utah, being present at the annual meetings of the associations of Utah and Idaho. Wherever he has been his coming has been heralded by the physicians and the daily press in such a manner as to give him large and enthusiastic audiences. No other single effort in any part of the country has accomplished as much as his visits to call attention of the people to the interest they should take in preserving the health of their communities, in prevention of disease and supporting all public efforts for their own well being and for the sanitation in the cities in which they live. He has done much to hasten the day when the National Government will contain a Department of Health which is certain to be established within the next few years. Nothing but good comes from these visits of Dr. McCormack and he is always a welcome visitor. C. A. S.

MEDICAL NOTES

WASHINGTON.

The New Providence Hospital. This new hospital was opened for the reception of patients last month. It is a magnificent, six story, fire-proof building, which has been under construction for a year and a half and cost a million dollars. It occupies two blocks of ground, between Seventeenth and Eighteenth Avenues, on East Jefferson. It contains three hundred beds for patients, besides one hundred and fifty for nurses, sisters and attendants. Whatever is latest and best in hospital construction has been introduced in this building, both for the comfort and accommodation of patients and attending physicians. It is provided with five operating rooms, all of which are equipped with the latest surgical appliances. There is no hospital on the Pacific Coast which is superior or more advanced than this institution. Like all the hospitals in this section, it is open for the reception of patients of all physicians, each of whom cares for his own patients according to his own methods and plans. This institution fills a long-felt want in Seattle in the way of greater hospital facilities, since the hospital growth has not of recent years kept pace with the growth of the city.

The Noble Hospital. This hospital is located in Seattle, at Woodland Park Avenue and Kilbourne Street, on the north side of Lake Union. It is the only hospital in this section of the city, which contains about seventy-five thousand people. It was opened for the reception of patients in August, being built at the expense of about $35,000. It is a modern, up-to-date institution containing all the necessary hospital equipments for efficient work, having a capacity for forty beds. It is owned by a stock company of physicians living in Seattle. It has no staff, but is open for the reception of the patients of all physicians, each of whom attends his own patients in the institution.

Report of the State Medical Examining Board. This report, filed with the governor, shows over one hundred and sixty-four applications for examination were made during the past year, of whom one hundred and four obtained licenses. Five who failed to pass received a refund of a portion of their fees. During the year the licenses of three physicians were revoked for unprofessional conduct, after conviction of fraudulently using the mails in connection with an institution in Spokane. Four convictions for illegal practice occurred in King County. Between twenty and thirty were secured during the year, and at present there are three cases before the court in Pierce County, two in Spokane and one in King. The sum of $4,941.75 was the income of the board for the year and $775.00 was collected in fines.

Clean-up at North Yakima. As a result of the clean-up campaign in North Yakima the death rate for 1911 so far is noticeably below that of 1910. The decrease in the fatality of typhoid is most striking, there being 31 deaths among those who contracted the disease in 1910 as compared to 5 deaths so far this year, with a record of no typhoid cases originating in North Yakima since early in July. The decrease in death rate is, also, noticeable in the diseases of infants.

Industrial Insurance Examiner. Dr. John W. Mowell, of Olympia, has been appointed chief examiner for the state industrial insurance commission. The commission has prepared a system of reporting accidents which will provide a reliable record of all circumstances connected with the accident and of medical services. These records will be valuable as a protection in the case of lawsuits both for the employer and employe, and will also protect the physician against malicious malpractice suits.

Dr. A. B. Kidd, of Seattle, had an unusual series of narrow escapes in the early part of September. Dr. Kidd and his family were riding in his automobile when a small boy jumped out from the curb almost in front of the machine. The doctor dodged the small boy, just missed hitting an on-coming street car, dodged another small boy, grazed a telegraph pole, drove across the sidewalk into a hole in a vacant lot, throwing Mrs. Kidd from the car, breaking her arm, all in less than ten seconds. The doctor himself was not injured.

Physician to the Soldiers' Home. Dr. H. Corson, of Seattle, has been appointed the regular physician and surgeon for the Soldiers' Home at Orting. Dr. Corson has been a resident of King County for 25 years and is the father of Dr. W. H. Corson, the superintendent of the King County hospital.

County Health Officer. Dr. C. R. Duncan has been appointed deputy county health officer for Wapato, in accordance with a decision reached by the Health Commission of North Yakima and the State Board of Health that the sanitary condition of the county could be best managed by the appointment of a deputy in charge of the small towns.

Dr. Guy S. Peterkin, of Seattle, and Miss Nora Lillis, of Spokane, were married September 22. Dr. and Mrs. Peterkin left immediately for a six weeks' trip through the East.

Dr. J. W. Stevenson, of Palouse, has returned from a two months' visit in the East, where he attended many of the large clinics.

Dr. E. A. Goldsmith, of Puyallup, has moved to Tacoma, where his two daughters are in school.

Dr. F. J. Stewart, of Tacoma, has been appointed state medical director for Modern Woodmen of America.

Dr. J. H. Corliss, of Sumner, has sold his practice to Dr. F. L. Wood, who has recently arrived from Toledo. Dr. Corliss will retire temporarily at least from active practice and will live on his farm.

OREGON.

Dr. R. W. Stearns, of Medford, received painful but not serious injuries when his automobile was struck by a train, September 8. The automobile was completely demolished and Dr. Stearns was fortunate to escape with his life.

Sentenced to Jail. A sentence of 30 days in jail has been pronounced upon Dr. T. J. Pierce, who has been found guilty of practising without a license. This is the first jail sentence that has been imposed in Oregon for this offence and it is to be hoped that it will have a salutary effect upon other practitioners who are in the same class.

OBITUARY.

Dr. F. W. Van Dyke, of Grants Pass, Ore., the retiring president of the Oregon State Medical Association, died at his home August 14, at the age of 59. He was the first mayor of Grants Pass and was reelected to a second term. The business houses were closed at the time of the funeral as a token of respect. Dr. Van Dyke was graduated from Bellevue Medical College, New York, in 1875, and was always classed among the progressives in medicine. He was one of the ripest and most accomplished scholars in the State of Oregon, broad in his conceptions and ethical in his practice. He was the soul of honor and constantly fought for a higher standard in every phase of life in which he participated. Being for many years one of the most prominent physicians in the state, his loss will be generally and sincerely felt.

Dr. David Mitchell, of Olympia, Wash., died at Yellowstone Park, August 30, from disease of the heart. He was born near Toronto, Canada, sixty-four years ago. He was graduated from Trinity College, Toronto, where he studied medicine. After practising a few years near his home, he moved to Kalamazoo, Michigan. About thirty years ago he came West with a party of emigrants, and settled in Olympia. He did not practise medicine in this city, but speculated successfully in real estate and accumulated a fortune. Besides holding property in the city, he had a large ranch, where he spent most of his time. He was very well known by all classes of people of the city and leaves a very large circle of friends and acquaintances.

Dr. Edward Desmond died at Spokane, Wash., September 10, of typhoid fever, contracted while caring for a patient. He was 41 years of age and highly esteemed by his brother practitioners and the public of his city. The interment occurred at Buffalo, Wyoming, his former residence.

REPORTS OF SOCIETY MEETINGS

WASHINGTON.

MINUTES OF THE TWENTY-SECOND ANNUAL MEETING OF THE WASHINGTON STATE MEDICAL ASSOCIATION, SPOKANE, WASH., SEPTEMBER 5-7, 1911.

The twenty-second annual session of the Washington State Medical Association was convened in the Masonic Temple, Spokane, Wash., September 5th, 1911.

FIRST SESSION OF HOUSE OF DELEGATES.

The first meeting of the House of Delegates was called to order by the president, Dr. Wilson Johnston, at 10 a. m., September 5th, 1911.

On calling the roll a quorum was found present, the following delegates answering to their names:

Wilson Johnston, Spokane, president.
L. L. Love, Tacoma, president-elect.
J. E. Else, Pullman, second vice-president.
C. H. Thomson, Seattle, secretary.
H. M. Read, Seattle, trustee.
J. R. Yocom, Tacoma, trustee.
Frank Rose, Spokane, trustee.
G. N. McLaughlin, Seattle, delegate King County.
G. B. McCulloch, Seattle, delegate King County.
E. O. Jones, Seattle, delegate King County.
F. J. Fassett, Seattle, delegate King County.
H. E. Coe, Seattle, delegate King County.
C. M. Tinney, Bremerton, delegate King County.
A. D. Snyder, Creston, delegate Lincoln County.
W. D. Reed, Tacoma, delegate Pierce County.
C. S. Wilson, Tacoma, delegate Pierce County.
G. B. Smith, Anacortes, delegate Skagit County.
W. F. West, Everett, delegate Snohomish County.
Frank Hinman, Spokane, delegate Spokane County.
G. W. Libbey, Spokane, delegate Spokane County.
W. W. McKenzie, Spokane, delegate Spokane County.
N. J. Redpath, Olympia, delegate Thurston-Mason County.
C. N. Suttner, Walla Walla, delegate Walla Walla County.

W. B. Palmountain, Colfax, delegate Whitman County.
J. E. Lane, North Yakima, delegate Yakima County.

The minutes of the last session were not read, but were ordered approved as published in the Journal.

Annual Report of Treasurer (Abstract)

Debit.

1910—		
Aug. 25—No. 131.	Northwest Medicine	$ 98.00
Aug. 27—No. 132.	Whatcom County Society	50.00
Sep. 15—No. 133.	Northwest Medicine	17.00
Sep. 15—No. 134.	Stuff Printing Company	22.00
Oct. 18—No. 135.	Dr. G. A. Tripp	2.00
Oct. 18—No. 136.	Northwest Medicine	16.00
1911—		
Jan. 2—No. 137.	Dr. C. A. Smith	25.00
Jan. 2—No. 138.	Stuff Printing Company	22.50
Feb. 11—No. 139.	Northwest Medicine	41.00
Feb. 11—No. 140	Stuff Printing Company	35.00
Mar. 7—No. 141.	Stuff Printing Company	13.50
Mar. 7—No. 142.	Northwest Medicine	109.00
Mar. 7—No. 143.	Dr. Frank Hinman	14.00
Apr. 5—No. 144.	Northwest Medicine	183.00
Apr. 5—No. 145.	C. H. Thomson	14.00
Apr. 8—No. 146.	Ray & Dennis	16.50
May 15—No. 147.	Northwest Medicine	48.00
Jun. 9—No. 148.	Salary—secretary	120.00
Jun. 15—No. 149.	Northwest Medicine	96.00
July 17—No. 150.	Northwest Medicine	40.00
Aug. 5—No. 151.	Northwest Medicine	90.00
Aug. 10—No. 152.	C. H. Thomson	30.00
		$2720.91

Credit.

1910—	
Aug. 16—Dr. L. L. Love	$400.00
1911—	
Feb. 1—Dr. L. L. Love	436.41
Feb. 7—Dr. C. H. Thomson	180.00
Mar. 3—Dr. C. H. Thomson	329.50
Apr. 3—Dr. C. H. Thomson	600.00
May 6—Dr. C. H. Thomson	317.00
July 15—Dr. C. H. Thomson	130.00
Aug. 15—Dr. C. H. Thomson	328.00
Sep. 3—Balance	1618.41
	$2720.91

The balance as shown by the Seattle National Bank book and check book of the Treasurer, is $1,618.41, all checks, Nos. 1 to 23 inclusive, drawn on the bank having been paid and returned with the exception of check No. 20, drawn July 17th, for $40.00 in favor of Northwest Medicine, which was lost, and in lieu of which check, No. 21 was drawn and paid. Payment on check No. 20 was stopped. (Signed) P. W. Willis,
Treasurer.

Motion was made and adopted that the Treasurer's report be accepted and referred to the Auditing Committee. There being no members of the Auditing Committee present, the president appointed Drs. J. E. Else and C. S. Wilson as an Auditing Committee.

Annual Report of Secretary (Abstract)

Membership of Component Societies.

	State Assn. Memb.	
County—	1910	1911
Asotin	1	...
Benton	7	...
Chehalis	23	...
Central	7	9
Clallam	4	4
Clarke	13	14 (1 Hon. Memb.)
Cowlitz	7	...
Jefferson	9	10
King	283	272 (16 Hon. Memb.)
Kittitas	10	...
Lewis	18	15
Lincoln	16	...
Okanogan	8	...
Pacific	7	9
Pierce	94	91 (12 Hon. Memb.)
Skagit	15	8
Snohomish	38	30
Spokane	162	78 (18 Hon. Memb.)
Thurston-Mason	10	11 (1 Hon. Memb.)
Walla Walla	31	23
Whatcom	39	34
Whitman	32	22
Yakima	29	35
Total	863	642 (48 Hon. Memb.)

The apparent decrease in membership is due to several causes: the custom of carrying members long delinquent as being still members, which was not done this year; and in part to the increase in dues. From my observations during the past year I believe that our dues are too high and should be reduced.

Treas. rec'd during year—Dr. L. L. Love	$ 836.41
Treas. rec'd during year—Dr. C. H. Thomson,	1884.50
Treas. rec'd during year—Total	$2720.91
Expenditures during year	1102.50
Balance	$1618.41

As ordered at the last session, the Committee on By-Laws (Drs. C. H. Thomson, J. R. Yocom and Alfred Raymond), went over them and now offer the revision for your inspection. Copies of the revised By-Laws were printed and issued to the secretaries of the component societies with the request that they bring them to the attention of the several societies and to instruct their delegates in regard to them.

The Central Washington Medical Society would like to reorganize as the Chelan County Medical Society. As all of the members reside in Chelan County the extra territory is of no benefit to them.

The secretary received a communication from the A. M. A. in regard to the proposal that membership in a county or district society carry with it membership in the State Association and in the A. M. A., the Journal of the A. M. A. to be subscribed for individually. The annual dues in the A. M. A. are $1.00 and the subscription for the Journal $4.00. The opinion of this Association is asked for.

Two bills were received for the prosecution of illegal practitioners. The bill from Ray and Dennis for $16.50 was paid as it received the O. K. of the examining board. A bill from C. B. Peyton for $416.50 was not paid as the Examining Board has never passed upon it.

The following deaths have occurred during the past year:
Dr. J. H. Flagg, Vancouver;
Dr. W. C. Hastings, Seattle;
Dr. J. J. McKone, Tacoma;
Dr. J. J. Smith, Enumclaw.

(Signed) C. H. Thomson,
Secretary.

Motion was made that the report be accepted and that the chair appoint a committee of three to consider questions brought up in the Secretary's report. The motion was adopted and the chair appointed Drs. J. R. Yocom, G. B. Smith and H. M. Read as the committee.

There being no report from the board of trustees the president stated that the annual reports of the president and secretary were to be considered as reports of the Board of Trustees, as the president and secretary of the Association were also president and secretary of the Board of Trustees and their reports contained all of the doings of the Association for the past year. He regretted the apparent lack of interest taken in medical societies. Considered that the annual dues were too high and that they should be reduced. We should make membership worth something. It should be a benefit to them and the Association should stand for something. The House of Delegates should go into these matters and should endeavor to evolve a method of correcting these conditions, and it should also investigate secret fee-splitting which is threatening great harm to the profession.

There were no reports from the Committees on Pure Food, Tuberculosis and Venereal Prophylaxis.

Report of Committee on Arrangements (Abstract)

Tuesday noon—Chamber of Commerce will entertain visiting physicians at luncheon.

Tuesday evening—Banquet at Davenport's. Visiting ladies will be given a theater party and a supper at Davenport's.

Wednesday afternoon—Tea and an auto ride for the visiting ladies.

Wednesday evening—Dr. and Mrs. Wilson Johnston will give a reception and dance at Davenport's.

Thursday afternoon—Auto ride and base ball game.

(Signed) G. W. Libbey,
Chairman.

The report was accepted.

Report of Committee on Necrology.

See annual report of secretary.

The report was accepted.

The secretary called attention, that, as this Association was incorporated, the revised By-Laws should be presented to a general meeting for ratification. Dr. W. D. Reed moved that the By-Laws as finally amended by this House of Delegates be submitted to a general meeting before adjournment. The motion was adopted.

The House of Delegates then adjourned to meet at 9 a. m., the following morning.

SECOND MEETING OF HOUSE OF DELEGATES.

President called the House to order at 9 a. m., September 6, 1911. A quorum was present.

Report of Committee on the Secretary's Report.

The committee recommends that:

The Chelan County Medical Society, now a part of the Central Washington Medical Association, be granted separate existence.

The annual dues be reduced to two dollars per annum.

Article III be amended to read as follows:

Sec. 1. This Association shall consist of members, honorary members, fellows and guests.

Sec. 2. Members. The Members of this Association shall be such members of the component societies whose names and yearly dues have been forwarded by the secretary of the local county or district society to the secretary of this Association.

Sec. 3. Honorary Members. The Honorary Members of this Association shall be such distinguished non-resident members of the profession as shall be elected to honorary membership by a two-thirds ballot of the House of Delegates.

Sec. 4. Fellows. The Fellows of this Association shall consist of all those members already placed upon the roll of honorary membership and those members in the future who may, by reason of having been members in good standing for twenty years in a component society of this Association, be nominated by the delegates of a component society to the House of Delegates.

Sec. 5. Guests. Any distinguished layman, or any physician not a resident of this state, may become a guest during any annual session on invitation of the president or the officers of this Association, and shall be accorded the privilege of participating in all of the scientific work for that session. The president shall announce to the general meeting the names of such persons as have been invited to attend the meeting, and their names shall be enrolled as guests of that annual session.

The agreement with the State Board of Medical Examiners in regard to the prosecution of illegal practitioners shall be terminated, the same terms to be offered the component societies obtaining a conviction in the superior courts. (This agreement was that in the event of a conviction this Association was to pay one-third of the cost of obtaining evidence.)

(Signed) J. R. Yocom.
H. M. Read,
G. B. Smith.

The report was accepted and separate motions were made and adopted covering the several recommendations of the committee.

The secretary moved that a diploma or certificate be issued to the Fellows of this Association. The motion was adopted.

Dr. W. D. Reed moved that Art. VIII, sec. 4, be amended by adding the words "in writing." The motion was adopted.

Dr. W. D. Reed moved that Art. VIII, sec. 7, be amended by adding the words "or passed by" after the word "before." The motion was adopted.

Dr. J. E. Else moved that Art. VII, sec. 4, be amended by striking out the word "annually" in the sentence referring to the secretary's salary. The motion was adopted.

Dr. J. E. Else moved that provision be made to pay the Journal for three numbers when issued to delinquent members. The motion was lost.

The secretary moved that the By-Laws as finally adopted be printed and issued to members. The motion was adopted.

The House of Delegates then adjourned to meet at 4 p. m.

THIRD MEETING OF HOUSE OF DELEGATES.

The president called the House to order at 4 p. m., Sept. 6, 1911. A quorum was present.

The secretary presented a bill from C. B. Peyton for $416.50, the same being one-third of the cost of obtaining evidence in convicting illegal practitioners. The secretary pointed out that only one case was convicted in a superior court and objected to the payment of the bill on the grounds that the services rendered were of no value to the Association. Dr. F. P. Witter, secretary of the State Board of Examiners, stated that the bill should be paid as the Board had made an agreement with Mr. Peyton, that he had rendered services under that agreement and that the Board had already paid him their share for his services. Dr. Witter then explained the working of the new medical law and proceedings of the Board of Examiners. The secretary then moved that as the Association had an agreement only with the Examining Board that the amount of this bill be paid to them. The motion was adopted.

Dr. W. D. Reed moved that sec. 4 of Art. VIII be amended to read as follows: The House of Delegates shall nominate candidates for all the offices provided for in these By-Laws, shall fix the time and place of holding the next annual session and all reports of officers and committees shall be made to it in writing. After discussion the motion was withdrawn.

Dr. W. D. Reed moved to amend Art. VIII by adding sections 10 and 11, as follows:

Sec. 10. Nominations for any of the offices of this Association may be made from the floor preceding the election of officers.

Sec. 11. All officers shall be elected in general assembly by ballot on the morning of the last day of annual session.

After discussion this motion to amend was withdrawn.

Dr. J. R. Yocom moved that the chair appoint a committee of three to consider questions brought up in the president's address. The motion being adopted the chair appointed Drs. W. D. Reed, W. W. MacKenzie and G. B. Smith as the committee.

Dr. J. E. Else reported that the auditing committee had examined the accounts of the secretary and treasurer and had found them correct. On motion the report of the committee was accepted.

The revised By-Laws were then read and were adopted with the following changes:

Art. VIII, sec. 2. Providing that special meetings of the House of Delegates may be called upon petition of 15 delegates.

Art. IX, sec. 3. Adding Pend D'Oreille county to district number 4.

Art. IX, sec. 7. Seven trustees shall constitute a quorum.

Art. XII, sec. 2. Reducing the annual dues to $2.00.

Art. XII, sec. 4. Striking out this section.

The House of Delegates then adjourned to meet the following morning at 9.30 a. m.

Fourth Meeting of House of Delegates.

The president called the House to order at 9.30 a. m., Sept. 7, 1911. A quorum was present.

Report of the Committee on the President's Address.

We, your committee appointed to annotate the president's address and to make such recommendations as therein outlined, submit the following:

1. That this Association instruct its delegates to the A. M. A. to work for such amendment to the By-Laws as will make the reading of the reports of standing committees at a general session a part of the annual program.

2. That this Association send to Dr. Harvey Wiley a message expressing our appreciation of his work, our confidence in his integrity and our hope of his complete vindication.

3. (a) That this Association instruct its Committee on Tuberculosis to study the conditions affecting the control of this disease in the different parts of the state and suggest methods applicable to the different localities.

(b) That the Committee on Legislation prepare a bill dealing with this problem in an accurate, concise and practicable manner.

(Signed) W. D. Reed, Chairman.

On motion the report of the committee was accepted and its recommendations adopted.

Report of Committee on Tri-State Meeting.

Your committee appointed to meet with like committee from Oregon and Idaho for the purpose of arranging for a tri-state meeting, beg leave to recommend that arrangements for such meeting be made to be held in Portland next year. Oregon and Idaho have accepted this recommendation. (Signed) J. E. Else, Chairman.

On motion the report was accepted.

Dr. W. W. MacKenzie presented the following resolutions:

Whereas, we believe the present prevalent custom of fee-division is at variance with the high precepts of our profession, that it is grossly unjust to our patients and that the one means of its complete eradication rests with the ethical medical organizations,

Therefore, be it resolved, by the House of Delegates of the Washington State Medical Association, that secret fee-division in all of its forms, whether considered in the light of consultation or assistants' fees, unless the same be done openly and with the full knowledge of the patient concerned, is considered unethical, and,

Be it resolved, that any member of this organization who is found guilty of such unethical practice by the Board of Censors of our state or county societies be expelled from membership in the state and respective county societies, and,

Be it further resolved, that the public be fully informed through the daily press of the reason of such expulsion.

Motion was made that the above resolutions be adopted. Carried.

Dr. W. D. Reed moved that the reading of the reports of standing committees shall become a part of the regular program. The motion was adopted.

It was moved that no member of this Association shall hold more than one elective office at a time. The motion was adopted.

Election of Officers.

There being but one candidate for each office the secretary was instructed to cast the ballot of the House for the following, who were then declared duly elected:

President-elect, W. C. Cox, Everett; first vice-president, G. N. McLoughlin, Seattle; second vice-president, Frank Hinman, Spokane; secretary, C. H. Thomson, Seattle; treasurer, H. E. Coe, Seattle.

Delegates to A. M. A., G. W. Libbey, Spokane, and J. E. Else, Pullman; alternates, J. E. Lane, North Yakima, and H. D. Wilson, Tacoma.

Trustees: District No. 4, Frank Rose, Spokane; district No. 5, L. M. Sims, Kalama; district No. 6, G. B. Smith, Anacortes; district No. 7. W. C. Cardwell, Colfax.

Journal Trustees: Wilson Johnston, Spokane; J. R. Brown, Tacoma; W. F. West, Everett.

It was moved and adopted that the next annual meeting be held in Tacoma.

The House of Delegates then adjourned sine die.

C. H. Thomson, Secretary.

SCIENTIFIC PROGRAM.

Tuesday, September 5th.

10:30 o'clock a. m.

Call to order by the President, Wilson Johnston, Spokane.

Invocation, The Very Rev. Wm. C. Hicks, Spokane.

Address of Welcome, J. W. Hindley, Mayor, Spokane.

Response, H. M. Read, Seattle.

Address of the President, Wilson Johnston, Spokane.

2 o'clock P. M.

Dietetic Management of Febrile Diseases, Especially Typhoid Fever, Herman P. Marshall, Spokane.

Discussion opened by N. Wiley Jones, Portland, Ore.; R. J. Skaife, Colfax, Wash.

Antityphoid Inoculation, John E. Lane, North Yakima.

Abstract—Resume. Applicability to use in private practice; experience in Yakima Valley.

Discussion opened by Major Dean, Fort George Wright, Spokane.

Diabetes in Childhood, Walter Gellhorn, Seattle.

Abstract—Our present knowledge of diabetes. Treatment of the disease and its complications with special regard to the oatmeal diet. Report of cases. Conclusions.

Discussion opened by J. D. Leuty, Spokane.

WEDNESDAY, SEPTEMBER 6TH.

9:30 o'clock A. M.

Congenital Dislocations of the Hip, Fred J. Fassett, Seattle.

Discussion opened by Edward A. Rich, Portland, Ore.

Loose Bodies in the Knee Joints, Charles F. Eikenbary, Spokane.

Abstract—The various kinds of such bodies, and the method of their production. The disabling influence of loose bodies. Symptoms. The proper care of injured knees, with a view to the prevention of future derangements. Opening of the knee joint under local anesthesia. Report of twelve cases.

Discussion opened by Warner H. Carithers, Moscow, Idaho.

Treatment of Fractures by the Open Method, Walter C. Woodward, Seattle.

Abstract—Not every fracture requires open treatment. Two main causes for poor results, viz.: Mal-position and tissue between broken types of operable cases, fracture both bones of fore-arm; some fractures, humerus, femur (special apparatus). Both bones of leg (X-ray pictures), Technic. Especial attention to asepsis. Special instruments, uses of plates, wire or absorbable suture. Necessity of removing plate. Danger of infection the only objection.

Discussion opened by Dr. Ernest A. Sommers, Portland, Ore.; John O'Shea, Spokane.

2 o'clock P. M.

Ligature of First Portion of Subclavian Artery, James M. Neff, Spokane.

Discussion opened by J. B. Eagleson, Seattle.

The Hemorrhagic Menopause Uterus, T. C. Witherspoon, Butte, Mont.

Abstract—That type of atrophic endometrium, which is associated with hemorrhage and often causes a fear of malignancy. Other phases of the menopause uterus. Diagnosis. Treatment.

Discussion opened by Ernest Tucker, Portland, Ore.; C. N. Suttner, Walla Walla.

Cholecystectomy, an Experimental Study, J. Earl Else, Pullman.

Abstract—Review of the literature. Report of experimental work. Summary. Conclusions.

Discussion opened by R. C. Coffey, Portland, Ore.

Surgical Treatment of Fistula in Ano Without Mutilation of the Sphincter, K. A. J. Mackenzie, Portland, Ore.

THURSDAY, SEPTEMBER 7TH.

10:30 o'clock, A. M.

The Diagnostic Importance of the Ocular Manifestations of Syphilis, Ed. E. Maxey, Boise, Idaho.

Discussion opened by Arthur E. Burns, Seattle.

Treatment of Syphilis of the Central Nervous System, Walter C. Williamson, Portland, Ore.

Discussion opened by John M. Semple, Medical Lake.

Nine Months' Experience with 606 as Controlled by the Wassermann in Eighty Cases, G. Sherman Peterkin, Seattle.

Abstract—The value of the Wassermann reaction in syphilis; efficiency of 606 when used alone in curing syphilis. Frequency of dosage, size, indications for repeating same. Advisability of combining treatment with potassium iodide, mercury, etc.

Discussion opened by Ray Matson, Portland, Ore.; G. J. Fleming, Spokane.

Infantile Paralysis as Observed in Washington During 1910, E. R. Kelley, Seattle.

Discussion opened by J. E. Manning, Seattle; W. Gellhorn, Seattle.

ANNUAL MEETING OF THE INTERSTATE ASSOCIATION OF MEDICAL EXAMINERS, SPOKANE, WASH., SEPT. 6, 1911.

The annual meeting of the Interstate Association of Medical Examiners was held in Spokane, Wash., on September 6, 1911, at the Davenport Hotel, at 6 p. m. Dr. W. C. Cox, President of the Association, presided.

The Secretary's report was duly read and approved. The treasurer, Dr. Frank M. Taylor, of Portland, Ore., reported that the finances of the Association were in a satisfactory condition and tendered a detailed statement. Several applications for membership were censored and duly voted upon.

The officers elected for the ensuing year were: President, W. C. Cox, of Everett; Secretary, L. L. Stephens, of Seattle; Treasurer, Frank M. Taylor, of Portland, Ore.; Vice-Presidents, T. C. Witherspoon, of Butte, Mont.; H. B. Luhn, of Spokane; C. T. Cutting, of Seattle; Chairman of Board of Managers, Dr. E. W. Young, of Seattle.

Dr. Cox, the President, gave a most interesting address relating his experiences incident upon his recent visit to Los Angeles, Cal., as a delegate of the Association to confer with the delegates of the American Association of Medical Examiners, concerning a proposed uniting of the two societies. The doctor spoke at length of the advantages to every man making insurance examinations accruing from a membership in an organization founded on the lines of the Interstate, and the assistance each examiner would receive from the Examiners' Bulletin and the occasional meeting together of those skilled in insurance work which could not but help all to be a greater value to the insurance companies as well as more skillful diagnosticians.

K. A. J. MacKenzie talked on "Insurance Matters in General." He said he had been an examiner for thirty years and believed that every man who accepted a position as examiner for an insurance company should consider his obligations to that company second to none. He believed that it is a matter of conscience as well as duty to study the instructions from the home office, and endeavor to make his examinations and reports to his company as complete and as accurate as possible.

H. B. Luhn talked on the "Duties of Medical Examiners." He said in part that he believed the doctor should give his very best to his examinations for insurance, as much so as to his private cases. Not only should the heart, lungs and urine receive careful attention, but everything that affects the health and risk of the applicant should be put down in a careful, conscientious manner and sent promptly to the company.

T. C. Witherspoon took for his subject, "The Estimation of a Risk in Life Insurance Examinations." He believed that a man who was not willing to sacrifice the necessary time and give careful attention to every examination, using his utmost care and skill in determining the risk and sending a complete and proper report on each and every case should not accept the position as examiner.

He spoke of the difficulties at the home office of getting a complete report from the examiner causing delay and general dissatisfaction all along the line, as well as extra expense, and the danger of losing the applicant through delay. He also spoke of the real value to the examiner of the sphygmomanameter, the blood pressure often clearing up a questionable diagnosis, especially so in beginning renal trouble, even though not discovered by the urinalysis or the microscope.

C. T. Cutting submitted a paper on "The Value of an Organization like the Interstate to the Insurance Companies as well as to the Medical Examiners." The paper was read by L. A. Newton, as Dr. Cutting was unable to be present.

K. A. J. MacKenzie moved that the I. A. M. E. become affiliated with the American Association of Medical Examiners, and hereafter become known as the "Northwest Section of the American Association of Medical Examiners," this section to retain its identity and the publication known as the "Examiners' Bulletin" as their official organ. Upon motion duly seconded by L. A. Newton, same was declared a vote.

It was suggested that the Association arrange to meet each year in conjunction with the annual meeting of the Washington State Association and with the semi-annual of the Oregon State Association.

KING COUNTY MEDICAL SOCIETY.

Prest., G. B. McCulloch, M. D.; Secty., H. E. Coe, M. D.

The regular semi-monthly meeting of the King County Medical Society was held in the assembly room of the Chamber of Commerce, September 18, 1911. The meeting was called to order by the president, Dr. McCulloch, at 8:05 P. M., about 60 members being present. The minutes of the last meeting were read and approved.

Clinical Case.

Complete Fracture of the Superior Maxillae. C. M. Tinney presented this case for J. P. Schutt. The accident was caused by a horse stepping and the patient's face and resulted in the separation of the face below the orbits from the upper part of the skull. The wound has healed well but there is much tumefaction below the eyes which is slowly improving. The left eye is normal; the right eye turns upward to an extent which makes it useless.

Papers.

Importance of Early Recognition of Squint in Children. W. K. Seelye read this paper, considering the subject under the following heads: Definition of terms; conditions composing and associated with squint; discussion of causes, especially defective fusion sense; results to be obtained by treatment and methods of procedure; illustrative cases.

In the discussion G. W. Swift spoke of the causes of astigmatism and emphasized the importance of careful examination before beginning treatment. He agreed that operation should be the last resort.

C. A. Smith spoke of the importance of the paper to the general practitioner. He referred to the lack of treatment of this condition in years gone by and stated that formerly operation was the first thing considered.

H. J. Davidson stated that school children with squint are always nervous and asked whether this should be considered the cause or result of the disease.

A. G. Greenstreet considers that intelligent co-operation of the parents is a necessity and that they should understand that these cases require much time. He stated that every means possible should be employed to improve vision while the eyes are being straightened.

In closing, Dr. Seelye stated that nervousness in school children is much improved by the correction of the visual error.

Lateral Sinus Thrombosis. R. W. Perry presented the history of four cases, showing the following special features: Death from embolism six months after operation; infection of sinus by direct extension; sinus thrombosis at three years of age with points of difference in symptoms from those in the adult; aphasia and convulsions with recovery following operation.

In the discussion of these cases Bruce Elmore asked if the aphasia could have been due to edema.

A. E. Burns emphasized the importance of cyanosis beneath the eyes as a symptom of thrombosis.

In closing, Dr. Perry stated that he did not think the aphasia due to edema but possibly to pressure from the extradural abscess but more probably due to an embolus. Some radical operators advise the resection of the internal jugular vein before the operation. This, however, he thinks is too extreme and would resect the vein only when circulation cannot be established from below.

G. N. McLaughlin read a report of the House of Delegates at the recent meeting of the State Medical Association.

In discussing this report, C. A. Smith referred to the action of this state association at the last tri-state meeting and stated that he felt that Washington should not hold a separate meeting in addition to the tri-state meeting next year. He thinks that the present arrangement of holding two meetings would be apt to cause a most unfortunate breach with the Oregon association and proposed the following motion: It is the opinion of the King County Medical Society that it would be desirable to omit the annual meeting of our state association for the year 1912 and unite with the associations of Oregon, Idaho and British Columbia in a joint meeting to be held in Portland. Motion seconded and carried.

The secretary read the applications for membership of A. L. Cook, I. V. Freedman and A. T. Wanamaker.

OREGON.

TENTH ANNUAL MEETING OF THE EASTERN OREGON DISTRICT MEDICAL SOCIETY AT PENDLETON, SEPT. 13-14, 1911.

The meeting was enthusiastic and well attended. This district society comprises the following counties: Wallowa, Union, Malheur, Harney, Grant, Umatilla, Wheeler, Gilliam, Sherman, Wasco, Hood River Morrow.

The following program was presented, every paper being read by its author, an unusual occurrence:

Wednesday, September 13,—9 A. M.

Meeting of the Board of Censors.

Business session.

9:30 A. M.

Call to order by the president, Dr. E. O. Parker.

Address of welcome by Rev. F. J. Milnes.

Address of welcome on the part of the Pendleton and Umatilla County Medical Society by the president, Dr. R. E. Ringo.

Response by Dr. N. Molitor, of La Grande.

Observations on the Surgery of Urinary Calculi. Dr. George S. Whiteside, Portland.

Discussion by Dr. M. K. Hall, of La Grande, and Dr. C. C. Chick, of Ione.

This lecture was illustrated with stereopticon views by Dr. Ralph C. Walker, of Portland.

2 P. M.

Symposium—Gastric Ulcer.

(a) Diagnosis, prognosis and treatment of gastric ulcer from a medical standpoint, Dr. W. O. Spencer, Portland.

(b) Gastric Ulcer from a surgical standpoint, Dr. Ernest T. Tucker, Portland.

Discussion: Dr. N. E. Winnard, Heppner; Dr. John B. Gregory, Wallowa; Dr. Jacob Prinzing, Ontario; Dr. O. D. Doane, The Dalles.

The relation of the heart to general anesthesia and surgical operations, Dr. Robert Budd Karkeet, Hot Lake.

Discussion: Dr. Malcolm Bronson, Hood River; Dr. I. U. Temple, Pendleton.

7:30 P. M.

Public Health Matters by members of the State Board of Health.

9 P. M.

Entertainment.

10 P. M.

Banquet.

Thursday, September 14—9 A. M.

Sarcoma with special reference to its treatment by the mixed toxines, Dr. C. J. Smith, Pendleton.

Discussion: Dr. H. L. Dumble, Hood River; Dr. David Robinson, Mosier.

President's address.

Election of officers.

Adjournment.

1:30 P. M.

Let 'er Buck—at the Round-Up Grounds.

The officers were elected for the ensuing year as follows: President, N. Winnard, of Heppner; first vice-president, I. U. Temple, of Pendleton; second vice-president, Smith Taylor, of Vale; secretary and treasurer, T. M. Henderson, Pendleton.

PORTLAND CITY AND COUNTY MEDICAL SOCIETY.

Prest., Wm. House, M. D.; Secty., G. S. Whiteside, M. D.

The September vacation meeting of the Portland City and County Medical Society was held Wednesday evening September 20, with Dr. William F. Amos in the chair. Papers comprising a Symposium on Diseases of Children were read and discussed as follows:

1. Specific Diagnosis of Tuberculosis in Children, Ray W. Matson.

Discussion opened by G. Norman Pease.

2. Should a Tuberculous Mother Nurse Her Infant? Mary MacLachlan.

Discussion opened by George Parrish.

3. Can Clean Milk Be Obtained in Portland? Calvin S. White.

Discussion opened by Prof. E. F. Pernot.

4. Intestinal Diseases in Children, Joseph Bilderback.

Discussion opened by A. M. Webster.

5. The Modification of Cow's Milk, Edmond J. Labbe.

Discussion opened by A. D. Walker.

6. The Treatment of Chorea, W. T. Williamson.

Discussion opened by Wm. House.

7. Diagnosis and Treatment of Eczema, H. G. Parker.

Discussion opened by J. H. Bristow.

8. Relationship Between Diseased Tonsils, Rheumatic Fever and Heart Disease, A. K. Higgs.

Discussion opened by Boyd M. Richardson.

9. Differential Diagnosis Between the Exanthemata, F. H. Dammasch, being absent, paper was read by Dr. W. O. Spencer.

Discussion opened by J. Allen Gilbert.

The general discussion was participated in by nearly every one of the eighty members present, and in every way the meeting was a great success. In matter of interest and attendance, this meeting was probably the most successful in the history of the society.

BOOK REVIEWS

Edited by Kenelm Winslow, M. D.

One Hundred Surgical Problems. The Experiences of Daily Practice Dissected and Explained. By James G. Mumford, M. D., Visiting Surgeon, Mass. General Hospital; Instructor in Surgery, Harvard Medical School; Fellow of the American Surgical Association, etc. Cloth, 354 pp. W. M. Leonard, Boston.

Mumford is a well known and able operator and surgical writer. His new Practice of Surgery has recently been called the best single volume on surgery by a reviewer in this journal. In the work under consideration he treats of cases in the most entertaining manner. It is after all the *real* thing—teaching by real cases and not by a sort of composite photograph of all and precisely true of none, as is the case with our ordinary text-books. The cases here are not arranged in any systematic manner. For example, there are five groups on digestive disorders scattered through the book. In one group we find pyloric ulcer and obstruction; in another, duodenal ulcer; in another appendicitis; in a fourth group, enteroptosis; and in a fifth, spasm of the sphincter ani. Mumford has done special work in relation to intestinal surgery and enteroptosis and these cases possess unusual interest and value. It is remarkable what a variety of symptoms enteroptosis produces and how closely they often simulate organic lesions of various abdominal organs. The cases of obstruction of the colon due to visceral ptosis and relieved by the wearing of a support, or by exclusion of the colon, or colectomy, are particularly worth reading. Those cases apparently owing all their complicated and diverse symptoms to spasm of the sphincter ani, and cured by dilatation of the same, will certainly cause surprise. The x-ray bismuth plates of the abdominal viscera are uncommonly excellent and the various sequences of enteroptosis are clearly brought out. The comments on each case are wise and discriminating and add greatly to the value of the book. Mumford has a very happy and realistic style and the perusal of these cases will afford as much pleasure as profit. WINSLOW.

A Manual of Clinical Diagnosis by Means of Laboratory Methods. For Students, Hospital Physicians and Practitioners. By Charles E. Simon, M. D., Professor of Clinical Pathology and Experimental Medicine in the College of Physicians and Surgeons, Baltimore. Seventh edition, enlarged and thoroughly revised. Octavo, 780 pages, with 168 engravings and 25 plates. Cloth, $5.00 net. Lea & Febiger, Philadelphia and New York, 1911.

With the increasing demand for more accurate diagnosis the clinical laboratory is being brought more and more into use. Dr. Simon's seventh edition of his manual comes as a most complete guide and aid for such work. Part One, representing the technical portion of the work, has been abbreviated in portions dealing with older but elaborated in portions dealing with newer topics. For instance, the discussion of the Wassermann test with directions for carrying it out are full and explicit. This part presents explicit directions for almost every possible laboratory test. There are numerous excellent illustrations. Here, as well as in Part Two, the significance of the findings is discussed in an authoritative manner as only a man of Dr. Simon's experience in such work could discuss them.

Part Two is entitled, "The Essential Factors in the Laboratory Diagnoses of Various Diseases." Here, in alphabetical order, almost every disease is listed with a discussion of the usual laboratory findings. The title of this portion might well have been worded differently, because it might lead the young, over-zealous laboratory man into error. The number of diseases that can be positively diagnosed in the laboratory are few indeed as compared to those which cannot. As an epitome of the laboratory findings for use as an aid in diagnosis this part of the book should be almost as serviceable as Part One. The discussion of the significance of the findings in this part are especially interesting and instructive. The author is to be congratulated upon presenting the subject in so practicable yet so interesting a manner.

Davidson.

A Manual of Materia Medica. By E. Quin Thornton, M. D., Assistant Professor of Materia Medica in the Jefferson Medical College, Philadelphia. Octavo, 525 Pp. Cloth, $3.50, net. Lea & Febiger, Philadelphia and New York, 1911.

Thornton's book, like "Omnia Gallia in tres partes divisa est." The first part treats of posology and prescription writing, with remarks on incompatibility, weights and measures. The second part is devoted to a discussion of the drugs which are recognized by the U. S. Pharmacopoeia. In this section the description is chiefly of the sources, physical properties, incompatibilities, mode of administration and doses, following the alphabetical order of the pharmacopoeia. In other words, attention is mainly given to the materia medica and the space given to actions and uses of each drug is abbreviated, but the matter is concise and sound. In the third part we find a list of all the U. S. P. preparations, including their composition and the directions for making them. The book makes a very good guide for the use of the official drugs and for the introduction of students in materia medica. Thornton is a well-known experimenter and writer in pharmacology and his book can be highly recommended as a safe, sound and sensible exposition of modern materia medica, written in a concise style and supplying a most convenient classification for reference.

Winslow.

International Clinics. Vol. L, Twenty-first Series. Cloth; 300Pp. J. B. Lippincott Co., Philadelphia and London, 1911.

Modern infant feeding is treated by Dr. M. Ostheimir, presenting briefly some of the problems confronting the physician in this work. Both the percentage and caloric methods are considered with illustrations of each with a convenient and simple way of determining caloric values. Dr. C. M. Mills has an article on some recent clinical investigations of poliomyelitis during the epidemic in Philadelphia in June, 1910. The subject matter is arranged under the following headings: abortive cases, fulminating case, varieties in onset and course, period in incubation, clinical types according to location of the lesions and residual paralysis, diagnosis and treatment. Another article on the same subject from the standpoint of a health officer appears, written by Dr. Joseph Neff, of Philadelphia. This paper is based on the study of 99 cases occuring in Philadelphia in the summer of 1910, and is a study of infantile paralysis with reference to population, criminal contact, nearness to railroad and water routes, seasonable prevalence, temperature and rainfall, age incidence, early symptomatology and the time in days of appearance of paralysis. In a chapter on the development of the syphygmomanometer and its use, Dr. Francis Faught describes the different makes and their relative efficiency. There are numerous other monographs of interest which time does not permit us to notice.

Manning.

Manual of Diseases of the Ear, Nose and Throat. By John Johnson Kyle, B. S., M. D., Professor of Otology, Rhinology and Laryngology, Indiana University School of Medicine. Third edition, revised and enlarged; 176 illustrations, 12 mo., 670 pages; flexible leather; $3.00. P. Blakiston's Sons & Co., Philadelphia.

It is an agreeable surprise to find so complete a treatise on the ear, nose and throat in a book of such convenient size and moderate cost. The publishers have used thin paper in light but serviceable binding, and the author has used no unnecessary words. While offered only as a manual the book is more complete in its scope than many more pretentious volumes, nothing seemingly having been forgotten or slighted. The chapters on embryology, anatomy and physiology, bacteriology and pathology and methods of examination and treatment are good. The subject of tonsils, their diseases and the treatment, medical and surgical, is presented from a consistent standpoint and in considerable detail. The author's operation for removal of tonsils is a practicable one, simple in technic and safe. We note with interest and approval a good word for Pynchon's cautery dissection of the tonsil in selected cases. The subject of labyrinthine disease, particularly suppurative labyrinthitis, is brought down to date and is one of the features of this last edition of Dr. Kyle's book.

Seelye.

Spirochetes. By W. Cecil Bosanquet, M. D., Fellow of the Royal College of Physicians, London. Octavo of 152 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1911. Artistically bound; $2.50 net.

This small volume of printed matter, with complete illustrations, contains a wealth of information concerning the many varieties of spirochetes. It is a review of recent work on the subject in addition to that which has been introduced by the author, gained from original research. His observations had been to regard spirochetes as belonging to bacteria rather than protozoa in the scale of living things. The first part of the work comprises the morphology of spirochetes, variability of form, habitat, cultivation and development. The pathogenicity of certain forms appear to have been established in spite of the fact that Koch's postulates cannot be fulfilled. Relapsing fever, African tick fever, syphilis and yaws are practically conceded to be caused by spirochetes. That which is most familiar to the physician is the spirochetes pallida. The author has been very painstaking in giving a detailed description of this group, in addition to the methods of staining, examination and differentiating it from other spirochetes. Section two of the book deals with a systematic description of species. A very complete bibilography is appended.

Redon.

DIRECTORY OF MEDICAL SOCIETIES

Name. **Meetings Held.**

American Medical Association........................ **June, 1912—Atlantic City, N. J.**

IDAHO.

Idaho State Medical Association.....**Oct. 11-13, 1911—Boise**
President, J. W. Givens, Orofino
Secretary, E. E. Maxey, Boise

Kootenai-Bonner-Shoshone Counties Society................
President, ——————
Secretary, J. H. Shephard, Coeur d'Alene.

North Idaho District Society................................
President, J. N. Clarke. Moscow.
Secretary, Joseph Aspray, Moscow.

South Idaho District Society............**Jan. 19, 1911—Nampa**
President, O. A. Kellogg, Nampa.
Secretary, R. L. Glase. Boise.

Twin Falls County Society ...... **First Tuesday—Twin Falls**
President, W. F. Pike, Twin Falls.
Secretary J. S. Purdy, Twin Falls.

OREGON.

Oregon State Medical Association..................**Portland**
President, E. A. Sommers, Portland.
Secretary, M. B. Marcellus, Portland.

Baker County Society..
President, J. P. Hayes, Baker City.
Secretary, C. G. Patterson, Baker City.

Central Willamette Society...............................
President, J. C. Booth, Lebanon.
Secretary, Russell Wallace, Albany.

Clatsop County Society ....
President, R. J. Pilkington, Astoria.
Secretary, Clara Reames, Astoria.

Coos-Curry Counties Society ....
President, Walter Culin, Corvallis.
Secretary, E. Mingus, Marshfield.

Crook County Society ....
President, J. H. Rosenburg, Prineville.
Secretary, C. S. Edwards. Prineville.

Eastern Oregon District Society..........................
President, N. E. Winnard, Hepner.
Secretary, T. M. Henderson, Pendleton.

Lane County Society ....
President, T. W. Harris, Eugene.
Secretary, G. S. Beardsley, Eugene.

Marion County Society ....
President W. B. Morse, Salem.
Secretary, G. C. Bellinger, Salem.

Pendleton City and County Medical Society............
............................**First Wednesday—Pendleton**
President, J. A. Best, Pendleton.
Secretary, I. U. Temple, Pendleton.

Polk-Yamhill Counties Society ....
President, W. J. Gilstrap, Sheridan.
Secretary, L. A. Bollman. Dallas.

Portland City and County Society.....................
First and Third Wednesday—Portland
President, William House, Portland.
Secretary, G. S. Whiteside, Portland.

Southern Oregon District Society ....
President, F. S. Swedenburg, Ashland.
Secretary, A. C. Seeley, Roseburg.

Washington County Society ....
President, J. P. Tamiesie, Hillsboro.
Secretary, ——————

WASHINGTON.

Washington State Medical Association...................
President, L. L. Love, Tacoma.
Secretary, C. H. Thomson, Seattle.

Asotin County Society ....
Fourth Saturday, May, June, Sept., Dec.—Asotin
President, L. Woodruff, Asotin.
Secretary, D. H. Ransom, Clarkston.

Benton County Society ....**Prosser**
President,
Secretary, H. W. Howard, Prosser.

Central Washington Society ....
Second Tuesday—Wenatchee
President H. B. Haskell, Wenatchee.
Secretary, T. H. Grosvenor. Wenatchee.

Chehalis County Society ....
First Tuesday of Jan., April, July, Oct.—Aberdeen
Presdent, A. S. Austin, Aberdeen.
Secretary, C. E. Bartlett, Aberdeen.

Clallam County Society......**Second Saturday—Port Angeles**
President,
Secretary, D. E. McGillivray, Port Angeles.

Clarke County Society............**First Thursday—Vancouver**
President, C. C. McCown, Vancouver.
Secretary, H. S. Goddard, Vancouver.

Cowlitz County Society ....
President, C. W. Bales, Kelso.
Secretary, L. M. Sims, Kalama.

King County Society........**First and Third Monday—Seattle**
President G. B. McCulloch, Seattle
Secretary, H. E. Coe. Seattle.

Kittitas County Society ....
Annually and Subject to Call—Ellensburg
President, C. L. Hoeffler, Ellensburg.
Secretary, G. M. Steele, Ellensburg.

Lewis County Society..**First Monday—Centralia and Chehalis**
President, R. B. L Banks, Centralia.
Secretary, W. B. Hotchkiss, Chehalis.

Lincoln County Society ....**August 5—Spokane**
President, O. L. Adams, Davenport.
Secretary, A. D. Snyder, Davenport.

Okanogan County Society..**Second Monday in Jan., May., Sept.**
President, H. M. Fryer, Riverside.
Secretary, C. R. McKinley, Brewster.

Pacific County Society......................................
Third Friday in Jan., Mar., May, July, Sept., Nov.
President, Wilson Gruwell, South Bend.
Secretary, O. R. Nevitt, Raymond.

Pierce County Society....**First and Third Tuesday—Tacoma**
President, J. R. Brown, Tacoma.
Secretary, E. O. Sutton. Tacoma.

Snohomish County Society ....**First Tuesday—Everett**
President, E. A. Stafford, Snohomish
Secretary, W. F. West, Everett.

Skagit County Society ....**Burlington**
President, A. J. Osterman, Mt. Vernon.
Secretary, W. N. Hunt. Burlington.

Spokane County Society ....**First Thursday—Spokane**
President, E. D. Olmsted. Spokane.
Secretary, Frank Hinman, Spokane.

Thurston-Mason County Society ....**Olympia**
President, N. J. Redpath. Olympia.
Secretary, W. L. Bridgford. Olympia.

Walla Walla Valley Society ....
Second and Fourth Tuesday—Walla Walla
President, W. E. Russell, Walla Walla.
Secretary, Y. C. Blalock, Walla Walla

Whatcom County Society........**Second Monday—Bellingham**
President, F. V. Shute, Bellingham.
Secretary, E. D. Hatch, Bellingham.

Whitman County Society...............................**Colfax**
Third Monday of Jan., Mar., May, July, Sept., Nov.
President, W. C. Cardwell, Colfax
Secretary, J. E. Else. Pullman.

Yakima County Society..**First and Third Monday—N. Yakima**
President, J. F. Scott, North Yakima.
Secretary, E. F. Chase, North Yakima.

Puget Sound Academy of Ophthalmology and Oto-Laryngology ....**Third Tuesday—Seattle**
President, C. T. Cooke, Seattle.
Secretary, A. E. Burns, Seattle.

UTAH.

Utah State Medical Association..**Oct. 4-5, 1911—Salt Lake City**
President, F. W. Taylor, Provo.
Secretary, W. B. Ewing, Salt Lake City.

BRITISH COLUMBIA.

British Columbia Medical Association...................
President, Octavius Weld, Vancouver.
Secretary, A. S. Monro. Vancouver.

Vancouver Medical Association..........................
Second and Fourth Monday—Vancouver
President, H. W. Riggs, Vancouver.
Secretary, W. D. Keith, Vancouver.

STATE MEDICAL EXAMINING BOARDS.

	President.	Secretary.	Meets.
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WASHINGTON	E. J. Taggart, Bremerton	F. P. Witter, Spokane	**Jan., 1911—Spokane**
IDAHO	J. R. Woodward, Payette	O. J. Allen, Bellevue	**Oct., 1911—Boise**

Corrections and additions to this list are requested from the societies represented

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The Journal of the State Medical Associations of Oregon, Washington, Idaho and Utah

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DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF THE PACIFIC NORTHWEST
Subscription Price $2.00. In clubs of twenty or more $1.00.

Entered March 14, 1903, at Post Office, Seattle, Wash., as Second Class Matter, under Act of Congress of March 3, 1879.

VOL. III. New Series. NOVEMBER, 1911 No. 11

ADDRESS

SOME CAUSES AND PREVENTION OF INSANITY AND FEEBLE-MINDEDNESS.*

By John W. Givens, M. D.,

Orofino, Ida.

I wish to thank you for the expression of your confidence and esteem in electing me as your president for the current year. It is an honor to be the president of such a body of men and women as compose the Idaho State Medical Association and I appreciate the fact that I have been thought worthy to occupy the position.

I wish to consider with you for a few minutes some of the causes for and prevention of insanity and feeble-mindedness. What I shall say will be rather elementary but, I believe, will express some solid truths upon which we may rest. That insanity and feeble-mindedness are among the most distressing afflictions of the human race is too well known to us all. These ailments do not cause the distress of the individual sufferer alone; they keenly grieve his relatives and friends and, in a way peculiar to themselves, pain and annoy all who come in contact with them.

Insanity has been increasing throughout the civilized world for some decades but philanthropy, science and art have already greatly mitigated its more distressing conditions and we have good reason to believe that by the continued influence of these agencies both insanity and feeble-mindedness will now begin to decrease and that both, when inevitable, will be so modified as to be still further relieved.

To relieve and prevent these conditions it is immaterial whether we commence with the child or the adult. We must begin whenever and wherever we can. For the purpose of our present discussion we may as well begin with the child. It is the right of every child to be born free from strong, hereditary predisposition to feeble-mindedness or insanity. Society should, therefore, take as effectual means as are practical to prevent the feeble-minded or the insane from reproducing his kind.

There are at least two reasons why these classes should not be allowed to beget children. First, they could not take proper care of their offspring. Second, there would be the strong possibility of their offspring being mentally defective.

Aside from hereditary predisposition, alcoholism and the active stages of syphilis and tuberculosis in the parents are the most frequent prenatal causes of feeble-mindedness and insanity. It is still more difficult for society to deal with the alcoholic or the individual in the active stages of syphilis or tuberculosis than with those who are mentally defective. The latter are being more and more provided for in asylums, hospitals and sanitariums, where they should be made as happy as possible and kept from reproducing their kind. We are learning more and more that this can be done in a way to give the mental cripple a reasonably contented life, best adapted to his defective condition, most satisfactory to his friends and to society and most certain, if put in universal operation, to practically prevent a great deal of feeble-mindedness and insanity.

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*President's Address, Read Before the Nineteenth Annual Meeting of the Idaho State Medical Association, Boise, Ida., Oct. 11-13, 1911.

Yet the alcoholic or persons in the active stages of syphilis or tuberculosis are all likely to beget feeble-minded children and society should not rest until effective measures are taken to prevent such persons from begetting children. While such control is difficult, it is something to know that these conditions are among the frequent causes of feeble-mindedness and the truth should have the widest publicity and every reasonable effort should be made to limit such causes, both in preventing the conditions and in preventing such persons from begetting children. Health regulations, marriage regulations and cultivating a higher regard for the rights of every child to be born of parents free from these conditions ought to prevent some of the feeble-mindedness from this source.

In addition to reasonably healthy parents, the normal development of the child demands certain other essentials the first of which is plenty of pure air. Since pure air is so abundant, it would seem that every child would receive it abundantly but such is not the fact. Unfortunately, owing to the faulty ventilation of many homes, public buildings, cars, etc., neither the child nor the adult always receives a sufficient amount of pure air to meet the physiologic needs of his being. If it were possible for parents to see the impurities that are in the air and that are being more or less constantly taken into the tender lungs of their children and which go into the blood to impoverish and poison the mind organs, they would be horrified beyond expression. Not only may children be poisoned by the impurities that are in the air they breathe, but they are also often impoverished by the lack of the health giving element in the air they breathe. The exact knowledge of the physician and the skill of the architect and the builder must solve this problem in such a manner that all buildings, and especially those where numbers of children work, study, play or live, may at all times have a plentiful supply of pure air.

Again the breathing apparatus of the child is often in such an abnormal condition that he cannot inhale sufficient air, even when he has access to it; consequently he is partially suffocated all the time. It should be thoroughly and universally understood that the mind organs cannot become normally developed nor be physiologic in action without plenty of pure air and every faulty condition which interferes with an abundant supply of pure air reaching the blood should, so far as possible, be corrected.

The most common abnormal state of the breathing apparatus of the child that interferes with his air supply is a catarrhal condition of his upper air passages. This, in turn, is due to bad inheritance, impure air, exposure to wet and cold and the various diseases of childhood. These catarrhal conditions not only interfere with physiologic respiration but they become the culture ground of pathogenic micro-organisms whose poisonous products are absorbed into the blood to poison the mind organs. The catarrhal conditions lead to diseases of the sinuses, various deformities, headaches and general distress. They interfere with the senses of taste, smell, hearing and sight, whereby mentality is perverted in many ways.

As is well known, the removal of adenoids in children sometimes has a most gratifying effect in improving their mental condition. The removal of other causes which prevent the child obtaining plenty of pure air may not be so strikingly beneficial but cannot fail to be of great benefit to the child in after life.

The exanthemata are very fruitful causes of these catarrhal states and should receive much more careful and persistent attention during the period of convalescence than they do, to see that no catarrhal condition remains. The child with syphilis usually has a catarrhal condition of the upper air passages that interferes with his obtaining sufficient air; so with a child begotten by a parent with active tuberculous disease. In fact, most diseases of the procreating parent predispose the child to catarrhal conditions.

Our climate of the northern and central regions, with its sudden changes of temperature, humidity and wind velocity, with our indoor life a large part of the year, tend to catarrhal conditions of the breathing apparatus and our people need constant instruction in safeguarding their children against the influences which tend to these conditions.

Next in importance to pure air among the child's needs is good water. The mind organs cannot properly develop, nor can they do their proper work without plenty of good water. Children do not, as a rule, drink water enough to insure their best development.

As we all know, some of the diseases of the human family are chiefly water-borne and these are entirely too common both in the town and in the country. It has been satisfactorily demonstrated in various countries that these diseases may be almost wholly prevented, as most of them are diseases due to the want of application of simple sanitary truths. There should be an active campaign against these disgraceful diseases until in both city and country they will be almost wholly unknown.

Next to pure water comes proper food. There is no doubt that improper food is responsible for a great deal of feeble-mindedness and insanity. Improper elements of nutrition in the child with hereditary predisposition, alcoholism, syphilis and tuberculosis of the parent make up most of the causes of feeble-mindedness. These are what give rise to the stigmata of the softened bones, of the high arched palate and other rickety conditions of a poisoned, defective nutrition.

Proper food is absolutely necessary for the normal development of the child. With our bountiful food resources, our improved methods for food production, it would seem that all children in the United States could have proper food but they do not all have it. This is due partly to poverty and partly to want of knowledge on the part of those who feed the children as to what is proper food for them.

The introduction of teaching of scientific dietetics in our schools and the earnest efforts of sociologists and economists to give proper distribution of food for all persons will materially improve the feeding of children in the future.

During the first months of life, healthy mother's milk is the best food for the children. This truth is not so generally known as it should be. While the child fed on some other food may be plump, growing rapidly and apparently well-nourished in every way, in reality it may not be well-nourished, for the human body is a very complex organism and the development and functions of some of the important structures require many years and what the structure and function of later years will be depends upon what influences operated in earlier years. Therefore, long experience and thorough observation by many observers and under widely differing conditions are necessary to determine what is the best food for children.

There is no question but what the child that has good, healthy mother's milk for the first year of its life, has thereby given to it elements of nutrition and development which will be of lasting benefit. Just how important healthy mother's milk may be in the development of the mind organs, as the brain, the organs of special sense, the ductless glands, the reproductive organs and others, all of which have more or less to do with mentality, is not known, but it is a fair inference from what is known that the influence of such healthy mother's milk upon the development of all these organs is very important to their best and most nearly normal development and functional activity.

We have learned that the brain has not alone to do with mentality, but that the organs of special sense, the various glands, and particularly the action of some of the ductless glands, have a great deal to do with it. So true is this that every physician who has to do with feeble-mindedness and insanity wants every part of the body to be in the best anatomic and physiologic condition and then supplied with the best possible elements for nutrition, growth and activity. In the child are the germs—many of them yet latent—of what he may become in the subsequent years of his life and the food that nourishes him is necessarily a large factor in determining what that life shall be.

The plump, artificially fed baby should not be taken at the full health value of the artificial food vendor. The later growth and development of the child's complex structure and functions are yet to answer for the food of his early life. When good mother's milk cannot be had, of course, such substitutes as are possible must be decided on. After the first year good cow's milk should make up a large part of the child's food. In fact, this may very well make up a large part of the diet of most persons during their entire lives.

There are a few simple truths about milk that should be universally heeded. It should be from healthy cows and should be reasonably clean. As it is one of the best culture-mediums for the growth of micro-organisms, it is safest to pasteurize it and then keep it in a cool place until it is used, which should be as soon as practical.

As to other foods, they should contain in reasonably proper proportion the proteids, carbohydrates and fats in the widest practical varieties of each. All persons who have observed animal life know that apparently the best nutrition and development come from the largest variety of foods. The variety need not be great at any one meal. Indeed, much variety at one meal is not desirable as it would tend to overeating and to extravagance. The desirable variety should be obtained by change from meal to meal, from day to day, and from season to season. Wide variety pleases the palate, avoids satiety and tends to induce all those chemical changes in every part of the body which are so necessary to good nutrition, normal development and healthful activity.

We are aroused at times by the enthusiastic declaration of some great authority that this or that food is all sufficient for the requirements of sound health, but in a little while the special food of magic quality is forgotten and people wisely return to all the varieties of food accessible to them. Not but what in some particular form of disease some special food, as the buttermilk diet of Metchnikoff, in various toxic states, may be beneficial but in the main, and for the majority of people, a variety of food is best.

As to the quantity of food necessary for good nutrition, there are two things that should be always kept in mind. First, if there be not sufficient food taken to meet the requirements of the body for any length of time, it is certain that nutrition must suffer, for there is no way in which a deficiency for any length of time can be made up. Second, the structure of the body is such that some surplus of food may be disposed of without injury.

Since, therefore, we cannot know precisely the amount of food needed for the best health, the only safe way as to amount is to eat a little more than is necessary. This little more, however, may easily become entirely too much, and then there is trouble or it impends in the near future. If the food supply of the growing child could be so regulated as to be barely above his requirements, much distress of body and mind would be avoided and this is particularly true of the feeble-minded and epileptic child.

The amount of food that a child needs must be for the most part determined for the individual. If he is getting the proteids, carbohydrates and fats in fairly proper proportion and is making reasonably good gain in weight, it is safe to conclude that he is getting food enough. If, however, his gain in weight is not reasonably good, then there is either insufficient food or some serious ailment present.

In regard to the quantity of food needed by the adult, the same rules hold, except that it is sufficient to maintain body weight as, in the ideal condition of health, as is well known, weight does not change materially after mature development extending over a long number of years. In passing, it may be remarked that alcohol as a food or drink in the development of the mind organs is not necessary and in those predisposed to insanity it is dangerous, as the appetite for it may easily grow beyond control. The only safe way for the feeble-minded and those predisposed to insanity to take is not to use alcohol in any form.

It is reasonably certain that the effect of a moderate amount of sunlight is beneficial upon the development of the child and in maintaining the health of both children and adults. Strong summer sun heat which causes headache is bad for the mind organs and should be avoided. Physical exercise is necessary for the best development and health. Play is the most invigorating and healthful form of exercise for the child and the adult, who is so situated that he can take some exercise in the way of play, is doing well for his mind organs.

The education and training of the child and the mental habits of the adult have a great deal to do in preventing feeble-mindedness and insanity. The child should be taught the necessary truths about the care of his person. His habits of eating and masticating are matters for training, as are all personal habits including the very important ones of voiding his excretions regularly. The curse of constipation from which so many men and women suffer and which is the almost unvarying symptom accompanying insanity, may often be traced to improper habits formed in early childhood because of the deplorable lack of any instruction upon the subject.

That the adult should control his mental habits if he would attain his highest development is generally known, but that uncontrolled mental habits may often be one of the principal causes of insanity is not so well known as it should be. We know that the size and quality of the muscle will largely determine the weight the muscle can put up, but we do not always remember that the weight the muscle puts up will later determine the size and quality of the muscle. This interdependence of structure and function is nowhere more important than in the realm of mind and the individual who trains himself in sane act and speech may be sure that he is thereby more firmly establishing his mind organs in a sound, sane condition.

Requiring insane persons to memorize given exercises has been found to be a fairly good way to control their thoughts and to relieve to some extent depression and incoherency. Quiet mental work may help a hysterical, furious child out of its unhappy mental condition into one of normal, contented self-control.

These are mere suggestions as to methods but the great truth which I wish to impress is that what the mind organs are to be and what they do become, depend largely upon what the mental habits, words and acts are and that he who thinks, speaks and acts sanely may be sure that he is thereby, so far, fixing the fabric and structure of his mind organs in a sane condition.

Rest and sleep are imperative for the mind organs. Time and opportunity for sleep should be as regular as possible, as the waking and sleeping states are rhythmical and the rhythm should not be disturbed, especially in the life of the child. Causes which interfere with the sleep of the child or the adult should be sought out and removed if possible.

In conclusion, it may be said that, to prevent feeble-mindedness and insanity,

First, every child should be born of reasonably healthy parents.

Second, every person should have the necessary elements of good nutrition, particularly an abundance of pure air, good water and proper food.

Third, all toxic substances from outside the body should be excluded so far as possible and all products of body waste should be regularly eliminated.

Fourth, such habits of exercise of body and mind, rest and sleep, should be taught and observed as will tend to produce and maintain a sound mind in a sound body.

These are the simple but eternal verities of mental health.

ORIGINAL CONTRIBUTIONS

SYMPOSIUM ON DISEASES OF CHILDREN.

SPECIFIC DIAGNOSIS OF TUBERCULOSIS IN CHILDREN.*

By Ray W. Matson, M. D.
PORTLAND, ORE.

For the diagnosis of suspected tuberculosis in children the tuberculin tests deserve special consideration. In order to appreciate the significance of a reaction we must first consider the frequency of tuberculosis during this age period. Hamburger's statistics, based on the autopsy findings in nearly 1000 children, show that the frequency of tuberculosis increases from 15 per cent. in the first year to nearly 70 per cent. in the eleventh to fourteenth years, and that the mortality from the disease steadily decreases during this period. Furthermore, that the coexistence of tuberculosis in deaths, due to other causes, increases from 2 per cent. in the first to 50 per cent. in the eleventh to fourteenth years. Tuberculosis never occurs as an incidental autopsy finding during the first half year of life because the disease is invariably fatal during this period. It is only during the third or fourth year that healed tuberculosis is found postmortem, but at puberty evidence of healed tuberculosis is found in fully 50 to 70 per cent. of all cases coming to autopsy. From this we must conclude that tuberculosis is always active during early infancy because of its uniformly fatal termination and that, with the approach of puberty, the disease becomes less virulent, and the percentage of recoveries steadily increases.

The basis on which the valuation of the tuberculin test rests is the fact that the percentage of resulting reactions corresponds closely with the frequency of tuberculosis in autopsy findings. The clinical significance of the reaction, however, varies greatly, depending largely upon the age of the individual. New born infants and sucklings almost without exception never react. During the first year the percentage of infants reacting positively varies from 1 to 5 per cent., depending upon the social conditions of the material investigated. After the first year the percentage of positive reactions rapidly increases and by the fourth year attains, because of its occurrence in clinically healthy subjects, a frequency which permits one to assume the presence of inactive tuberculosis, a view which is supported by postmortem findings. The test is specific and exceedingly delicate, and when positive proves that the individual *has or has had* tuberculosis but, since inactive or healed lesions seldom or never occur during the first few years of life, a positive reaction means active tuberculosis. The value of a positive reaction in a child of more than four or five years of age is much lessened because of the fact that not only active, but inactive or healed tuberculous foci are able to produce a local reaction. We must, therefore, utilize the results of the test during this age period with great caution. There could be no greater mistake than that of subjecting each child presenting a positive reaction to treatment for tuberculosis. The diagnosis in these cases must be settled by a consideration of clinical data and physical findings, not by any test. A negative reaction, in the absence of cachetic conditions, progressive or miliary tuberculosis, is strong evidence against the presence of tuberculosis.

The choice of a test depends largely upon the individual tastes of the physician. The cutaneous test of Pirquet is by far the most popular, reliable and convenient. It consists of the application of a drop of undiluted old tuberculin to the skin, which has been abraded by means of a specially devised instrument, known as the Pirquet bore. An ordinary, blunt pointed gimlet serves the purpose equally well. Three spots, one inch apart, are usually prepared on the flexor surface of the forearm. To the upper and lower a drop of old tuberculin is applied, the center spot serving as a control. A traumatic reaction appears immediately but disappears in the course of a few hours. The specific reaction begins at the end of eight to twelve hours, and consists of a reddened areola which increases in extent and severity during the next twenty-four to forty-eight hours, then gradually subsides, leaving a brownish, pigmented spot which may persist for weeks. A lymphangitis often extends from the site of reaction to the neighboring perivascular lymphatics. The cutaneous test has been modified in many ways, none of which possess any advantages.

Detre believed that, through the application of different preparations of tuberculin, the human and bovine types of infection could be differentiated but his work has not been confirmed by other investigators. To Moro is due the credit for having proposed the application of an ointment containing 50 per cent. tuberculin which is rubbed into the skin in place of applying the preparation to an abraded surface. The method possesses no advantages, since it has been shown that the outcome of the test depends largely upon the length of time spent in the incorporation of the salve. The conjunctival test has not been accorded a warm welcome in the children's clinic. While it is believed that only those individuals suffering from active tuberculosis respond to this test, yet in my experience the test fails in those very cases wherein a result is desired. Then the difficulties encountered in its application, for instance, washing out the test solution by a flood of tears, make the results so uncertain that it is of questionable value.

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*Read before the Portland City and County Medical Society, Portland, Ore., Sept. 20, 1911.

The subcutaneous test has found a sphere of usefulness, especially in the diagnosis of suspected tuberculosis in grown-up children but, since an elevation of temperature is necessary its field of application is limited, not only because of objections on the part of parents, but because of the fact that most children possess a physiologic, labile temperature, in consequence of which the slightest irritation is sufficient to provoke an elevation which might be mistaken for a tuberculin reaction.

DISCUSSION.

G. N. Pease: Dr. Matson has given us a very thorough and concise paper as regards the specific diagnosis of tuberculosis in infancy. Of all the reactions for determining the absence or presence of the disease in children, the von Pirquet test is most reliable. The simplicity and ease with which it can be carried out also speaks for its usefulness. As to its reliability, von Pirquet cites some interesting statistics. Out of 124 cases showing positive tuberculous lesions at autopsy, 123 gave a positive reaction during life. Out of 179 negative reactions, 140 gave a negative test during life. A positive reaction in infancy points strongly to the presence of tuberculosis and usually in an active stage. A negative reaction does not necessarily exclude tuberculosis.

The fact that the von Pirquet test is much less reliable in adults than children seems to be due to the fact that in most adults there is a latent or healed process and this causes a positive reaction and would, therefore, be misleading. In infancy and childhood the latent and healed processes are rare and, therefore, a positive reaction generally means the presence of an active tuberculous focus.

The Moro test, though easy of application, is unreliable. The conjunctival test, including the Calmette and the Wolff-Eissen tests, occasionally lead to aggravating consequences. The subcutaneous injection of tuberculin, though the most reliable of all in adults, is probably the least applicable in children.

SHOULD A TUBERCULOUS MOTHER NURSE HER CHILD?*

By Mary MacLachlan, M. D.,
PORTLAND, ORE.

This question seems to deserve an unqualified negative. For the mother herself it would be apt to prove harmful, as her condition has already been aggravated by her pregnancy. Even in cases where the mother seems to improve during pregnancy, she suffers a great decrease of strength after parturition and is ill fitted as a nurse for her new-born child. The extra drain on her system depletes her strength still further and weakens her resistance to the disease.

It is possible for a diseased mother to bear a perfectly healthy child; therefore, the child itself at birth has a fair chance for escaping the fate of its mother if removed at once from her. Congenital tuberculosis is extremely rare, only about twenty authenticated cases having been reported up to 1908. Given, then, a child at birth free from tuberculous lesions, we would not need to apprehend the appearance of the symptoms later if removed at once from all sources of infection. Our present knowledge of the germ allows it but a limited cycle of existence under the most favorable conditions, which makes the theory of prolonged latency of the tubercle bacillus untenable. Symptoms appearing later would be the result of later infection, which would find in that hereditary predisposition which is generally admitted a favorable soil. In cases where the child has been allowed to nurse the mother and has become infected it has, when removed from sources of infection, shown a remarkable power of improvement.

Grancher, of Paris, has devised a plan for saving uninfected children. Two hundred children were taken away from tuberculous families and reared on little farms in the country. The first condition in such an experiment is a very careful selection of the children and they are retested from time to time. This will result in an increasing number of children saved from infection. In a series of 1131 cases collected by Dr. Wallstein no congenital cases were found. Of these 60 per cent. were under one year of age, and 26 per cent. were under three months. Two cases exhibited tuberculosis seven weeks after birth. These were city children mostly, and many were taken from unhygienic surroundings, but it shows the frightful result of infection in children. These statistics brought out the interesting fact that lung involvements predominated to a far greater extent than had been suspected and, no matter how or where the infection began, the lungs suffered the most often and most severely.

Infection from the mother may take place in either of two ways—by ingestion or by inhalation. Ingestion of the tuberculous germ could come directly from a diseased breast. Tuberculosis of the breast occurs not infrequently and may be of the miliary form and part of the general process or it may be primary, a rare condition. It may also be secondary, resulting from an extension of tuberculosis of the pleura or ribs or from a diseased axillary or other lymphatic glands or can be carried by the blood from some distant focus. Such a form of the disease is insidious except during pregnancy or lactation, when it advances more rapidly. Infection by ingestion may also take place from the mother's nipple infected indirectly by the mother herself in handling the breast with fingers contaminated by coughing or by sputum. Infection by ingestion may occur by the passage of the bacillus through a normal intestinal wall without leaving any lesion at that point, the infection becoming localized in a neighboring lymphnode or carried to a more distant part.

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Inhalation is apparently the much more frequent form of infection from the mother. Flugge's experiments show that large quantities of tubercle bacilli are necessary to cause infection by way of the intestinal tract and from this point of entry reach the lungs slowly, while exceedingly small quantities will cause pulmonary tuberculosis when inhaled in the moist state.

Those children who suffer from tuberculous glands or joint affections and seem to enjoy a sort of immunity from development of lung infection lesions may have acquired this immunity by having already survived a pulmonary infection. Unsuspected tuberculosis in one or both parents is very common.

Any obscure ailment in the mother accompanied by a fever or cough should be an indication for discontinuance of breast feeding, unless tuberculosis can be definitely excluded. Not only should the mother not nurse her child but no one suspected of tuberculosis should be allowed to fondle the baby or prepare its food.

In most cases complete isolation of the child from its mother is absolutely impossible and under these circumstances the mother must be made to understand that the child's chance of escape from tuberculosis depends on her constant observance of strictest hygienic rules. Certain methods also may be used to increase the child's resistance to infection and to this end various theories have been advanced. Figari, von Behring and others have experimented on the possibility of conveying antibodies from immunized cow's milk with an idea of increasing the resistance of infants. They demonstrated increased agglutinative power for the tubercle bacillus in such milk and its transference to offspring. This activity seems to be restricted, since it is only in the first week of life that the proteid substances are absorbed unchanged by digestive action.

In Kleb's work on tuberculosis the theory of active immunization of infants is presented. He says "Active immunization of infants by means of feeding tubercle bacilli or their products, made innocuous in various ways, has a promise of application in the future, since success has been obtained with suckling calves and guinea pigs in the experiments of Calmette, Guerin and Morin."

The strategic point of warfare in the universal crusade against tuberculosis is considered now to be the advantage we can gain in the home and what could be of more importance than a recognition of the danger and the adoption of methods for prevention of the infection in early infancy.

DISCUSSION.

George Parrish: A search of literature fails to find one authority who thinks a baby should nurse a tuberculous mother; and yet in removing a baby from the breast but one small step has been taken in the proper direction and that step is not the most important one. A cure or prevention should begin in the early months of pregnancy, when the patient should place herself under the care of the most competent medical experts and surround herself with the best hygienic and dietetic care. The beneficial effect on both mother and child of such attention cannot be overestimated.

After labor comes the selection of an artificial food. To gain an idea of what a task this is, one has to but remember that three hundred thousand babies under one year of age died last year from impure milk in the United States alone. This is appalling and I doubt if it could be any worse if the infant were put to the mother's breast the first nine months and left to take its chances. Whether weaned or not the baby is left with the mother, who lavishes her caresses and kisses on it, who prepares its food and drinks it through the same nipple to see if it is the proper temperature, who breathes as well as coughs in its face, and so on the mother infects her child in various ways other than nursing. One more word before closing. I believe the marriage of tuberculous people should be prohibited, or the woman sterilized or, in pronounced cases, abortions are justified.

CAN PURE MILK BE OBTAINED IN PORTLAND?*

By Calvin S. White, M. D.,
PORTLAND, ORE.

Can clean milk be obtained in Portland? It can. Portland has done more effective work in the two years period just closed than any city whose records are known to us. Prior to that few cities were worse. The conditions unearthed by the Board of Health at that time are now but stinking memories. The results in August, 1909, were 43 babies died of enteric disturbance; in August, 1911, 17.

The milk laws adopted by your city have ridden through tempestuous storms but are now in smooth sailing, and even the obstructionists—the dairy and food commissioner, the dirty land owner, the secretary of medical freedom league and, last but not least, the sneering daily press—all have fallen in line, or been lost by the wayside. Thirteen thousand cows have been tested for tuberculosis; 1600 have reacted, and of these approximately 1100 have been destroyed. Not six of all that number but have shown plenty of visible tubercles, bearing further evidence, if any were needed, of the reliability of the test. In the country tributary to Portland, 820 dairies have been inspected by men who know what sanitation is. Fifty-five new barns and 65 new milk houses have been built as a result of their suggestions.

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Fifteen thousand samples of milk have been examined chemically, and several hundred bacteriologically. In July, 1909, one sample of every two were condemned as unfit for food. In July, 1911, only 2.5 per cent. of all samples were condemned, and these were augmented because one thrifty Swiss insisted on adding water. The feeling so prevalent two years ago by the dairyman that any attempt on the part of our office to regulate his business was meddlesome and unwarranted is rapidly passing. All these are good and show a wholesome awakening of the public in prevention of disease and, were the commercial milk for adults alone, it would be sufficient. Unfortunately it now is, and always will be, the only safe substitute for mothers' milk for infants' food, and additional precautions are necessary, as cleanliness, cold and speedy delivery. Watered milk could not hurt your baby; 2 per cent. butter fat, instead of 4, will perhaps retard his growth, but will not hurt him. Bacteriologic examination is the only test for baby's milk.

Literally there is no such thing as pure milk. Drawn under any conditions, ever so sanitary, some microorganisms are found and, cooled for delivery, the temperature raised again over 60°, these multiply very rapidly. Any of the chain of pus organisms associated with mammitis, so common in fresh cows, can wreck the health or destroy the life of any baby. Chemical analysis shows none of these. Milk is the best general culture medium for all pathogenic organisms, hence the worst diet in the world for typhoid patients or children suffering from inflammatory diarrheas. Sour milk or butter milk, on the other hand, where the lactic acid bacillus predominates, are ideal but rarely used. Interesting is the fact that the negro in the South, whose poverty makes the diet of clabbered milk and corn pone universal, furnish a class almost immune to typhoid.

Tubercle bacilli, while not multiplying, find milk an excellent vehicle and, if you will consult your own cases, you will find a large proportion of the tuberculous glands in children in bottle-raised babies. A sample of milk from a dairy supplying a town in Oregon, contained 4.5 per cent. butter fat, but bacteriologic examination showed a rich culture of typhoid, due to an easily traced water supply.

The physician who cares for children should cooperate with the parents in supervising the baby's milk supply. It should come from one herd, not from some retail association which buys from every dairyman offering. Here one negligent man might ruin a dozen clean ones. Recently a physician making diseases of children a specialty had the parents of a sick child discontinue the use of milk containing 8,000 organisms per cc., and buy from a dairyman whose milk contained nearly 500,000.

The babies are entitled to the best food on the market, and the physicians should consult the records of the city Health Office, and use the laboratory of the state and find out just where that food can be obtained.

DISCUSSION.

E. F. Pernot: I heartily concur with the statements made by Dr. White and my only criticism is that he expressed too mildly the existing conditions of some of our marketable milk. The consumers of milk can and will have clean, pure and wholesome milk when they choose to demand it. The majority of milk producers strain their milk as soon as it is drawn, for the purpose of removing dirt, manure, litter and hair. This fact is well known to consumers and, so long as they desire it so, who shall say nay? If only adults consumed the milk as a diet, they, being free agents, can suit their own fancy and tastes. Unfortunately, however, it is essentially an infant's food provided by nature to be transmitted unsullied and uncontaminated directly from its source to the consumer.

There are three important contaminations of commercial milk: feces from tuberculous cows, streptococcic infection from suppurating udders, typhoid inoculations from water contaminated with human excreta. Out of the twenty guinea pigs inoculated with one gram each of butter taken from the market, three died of generalized tuberculosis. The tubercle bacilli being too small were not strained out with the manure from the cow. Serious cases have occurred of stomatitis or ulcerations of the mouth and lips of babies and children fed with milk from cows suffering with suppurative mammary glands discharging pus and streptococci into the milk cisterns.

Samples of milk containing from one to ten per cent. pus occasionally find their way into the laboratory. Did the man who milked the cow know something was wrong with the animal? Yes, but he strained out the clotted chunks of bloody pus and marketed the milk which appeared all right and had a commercial value. I do not make these statements to discourage the use of milk, but to encourage and stimulate action toward the production and sale of clean wholesome milk, such that we may not fear feeding to our little ones.

INTESTINAL DISEASES IN INFANTS.*

By J. B. Bilderback, M. D.,
PORTLAND, ORE.

Intestinal diseases broadly speaking would be any disease of the intestinal tract; however, this paper will deal only with the ones caused by improper feeding and certain bacterial infections. This will exclude such diseases as typhoid fever, stenosis of the pylorus, appendicitis, and also marasmus, as the latter one is caused by some vice of nutrition, denoting an inability to assimilate sufficient nourishment to replace the destructive metabolism of the body; consequently the child starves.

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The extreme susceptibility of infancy to intestinal diseases is due to the fact that the digestive organs are heavily taxed to meet the demands of a growing body and that the mucous membrane is very delicate, has but little resistance, and is exposed to injury by irritation and to infection. Statistics gathered from the large cities of Europe and America show that the largest number of deaths occurring in the first two years of life are due to gastroenteric diseases; in fact, excluding the deaths from diseases of the lungs, this is more than all other causes combined.

Under the term diarrhea are included all cases whose principal symptoms are diarrhea, vomiting, loss of appetite, increase of temperature and a general disturbance of nutrition. In considering the diarrheal diseases it will be necessary to make a distinction between dysentery which has a specific cause—the bacillus dysenteriae—and what is commonly known as summer diarrhea. These cases show at autopsy no definite lesions referable to the intestinal tract, while in dysentery the lesions in the ileum and particularly in the colon are well marked.

What is the cause of summer diarrhea? Of all the etiologic factors the kind of food is the most important. Holt collected statistics on two thousand fatal cases and only three per cent. were breast fed. However, the difference in chemical composition between cow's and mother's milk will not explain the mortality, as cow's milk is fed during the cold months with comparative safety. Each constituent of cow's milk has been attacked in causing the trouble; the casein by the Americans, the sugar by the Prussians, the fat by the Breslau school, and now the Berlin pediatricians are attacking the salts. There is but one thing left to criticise and that is the difference in the water.

Nature intended woman to nurse her offspring. Failing in this man resorts to craft and steals the milk of the cow which naturally belongs to a calf and a calf's digestive apparatus. Great advances have been made in infant feeding but, regardless of with what intelligence we may modify cow's milk, it differs from woman's biologically. Any modification of cow's milk at best is only an experiment. Most artificially fed infants suffer from some derangement of digestion. When an infant has an attack of indigestion it is thought that, in consequence of the undigested food in the stomach or intestine, bacteria that are normally present in the intestinal tract can under this condition multiply so rapidly as to produce serious disease; or bacteria may be introduced in such numbers and virulence as to overpower the digestive organs, and it is also possible for bacterial products, that is, toxins to be ingested with the food, requiring only absorption to produce their effects.

During the last twenty-five years a vast amount of work has been done along bacteriologic lines to find the organisms that are responsible for the great mortality in infants. Since bacteria are popularly held responsible for diarrheal diseases the question naturally arises, what organisms or toxins are the cause of the mortality? Unfortunately there has never been isolated any organism which can experimentally be proved to be the specific cause of death and there has never been isolated from milk contaminated by bacteria any definite toxic substances and, what is more, there has not been isolated from the fecal discharges bacteria which can experimentally be proved to be responsible for the deaths from diarrhea.

However, the fact remains that we do have impure milk, and by impure I mean milk containing either bacteria or their toxins which, when fed to infants, produces diarrhea. There are numerous instances on record where every child in a ward would be attacked with diarrhea, while in other wards in the same institution infants not fed upon the same milk would not be ill. Even though milk may have been sterilized which kills the bacteria, the toxins produced by them may be present.

Recently, Reitschel, of Berlin, has made an exhaustive study of diarrheal diseases and the point he has made is that bacterial decomposition of milk, or the effects of the action of bacteria in the intestinal tract, is a contributing cause to infant mortality but these alone are not sufficient to explain the great number of deaths during the hot months. In large cities where industrial conditions are highly developed there has been the greatest increase in artificial feeding, particularly where the population is congested and the struggle for existence is very hard. In these centers of population there have been important advances made in securing for the poorer classes a purer milk supply by means of pasteurization and sterilization. However, the reduction of mortality has not occurred. In the report furnished by Holt, for New York, covering a period from 1904 to 1908, there is seen no marked change in deaths during the summer months.

What then is the factor which is responsible for the high death rate? Rietschel, Finglestein and others claim that it is due to the high temperature, especially as occurs in dwellings. The number of deaths increases directly with the increase in temperature. They state that the effects of heat are most damaging when it is continuous, with only slight variation of temperature between night and day, as the child has no chance to cool off. When the surrounding temperature is high there is a disturbance in heat loss, and the failure of the child to lose body heat is the cause of the increase in body temperature which lowers the child's vitality and makes a demand on the body cells to functionate under abnormal conditions, with a consequent perversion of metabolism and formation of products which are injurious to the life of the child. It is a well known fact that frequently babies suffering from digestive disturbances, if over heated by hot water bottles, will have a high temperature, rapid breathing, symptoms of collapse and diarrhea which may result in death.

How can it be explained on the ground of milk contamination that, between the temperature of 80° and 90°, the number of deaths is markedly increased as a result of the ten points rise in temperature? Does it seem probable that ten degrees can make such a change in the milk as to cause such an enormous increase in the number of deaths?

The infants that have had digestive disturbances are the first to die during the hot weather. Rietschel gives experimental proof to the effect that infants suffering from digestive disturbance react with a rise of temperature—if the outside temperature be high—more readily than do healthy infants. He subjected infants both healthy and those suffering from indigestion to high room temperatures. Those suffering from indigestion reacted with higher temperatures than the healthy ones and in some cases severe diarrheas were produced. In all cases the diet was free from bacterial contamination.

In order to determine the effect of milk contaminated by bacteria as commonly found in it, he allowed milk to stand for twenty-four hours in an open vessel in a room with a high temperature. He then gave it to a large number of infants, some healthy and some suffering from intestinal disturbances. The majority of healthy ones were unaffected; the symptoms of the others in some cases were aggravated but in no case was any serious disturbance excited.

Any one who has given the subject of diarrheal diseases intelligent, unprejudiced consideration will be impressed with the fact that a solution of the problem is a difficult one, that over feeding and the use of improper food produce an indigestion which is probably the most important predisposing cause, lowering the vitality and rendering the children incapable of withstanding either high temperature or infection. If high atmospheric temperature plays a more important role than it was thought formerly to do, then in the treatment of summer diarrhea every effort should be made to lessen as far as possible the overheating of the child. Keep the child outdoors where there is a circulation of air. The frequent use of cool baths or sponging at a temperature of 70° to 80° F. every two or three hours is to be highly commended, as the results which have been obtained with hydrotherapy in intestinal diseases with high temperature have been most gratifying. Every effort should be made toward the improvement of the milk supply, as infants should have the purest food obtainable but, in view of the present discouraging condition in the reduction of summer mortality, any new point of attack which promises diminution of the occurrence of summer diarrhea should be welcomed.

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DISCUSSION.

A. M. Webster: Summer diarrhea is in some ways a misnomer, as infants have this trouble in the winter time. We might perhaps resort to the old method of naming a disease and not being sure of any specific agent as a cause and call it idiopathic diarrhea. It is non-specific in character, so far as our present knowledge goes.

To sum up Dr. Bilderback's paper we may say there are two main causes of this trouble: First, improper or contaminated food which is not derived from the mother's breast; second, increase of temperature which is prolonged for some time, usually some weeks. I think a third factor deserves consideration: the deterioration of cow's milk which inevitably occurs when the streams get low and the water poor and the pastures have become dry and brown.

It is noticeable when we are well advanced into the dry season that cases of summer diarrhea multiply, even when a high temperature does not prevail. Our nights are nearly always cool and yet we have many cases of summer diarrhea. In such cases, if the child is being fed cow's milk, a change to an artificial food such as malted milk usually clears up the trouble with a minimum of medication.

THE MODIFICATION OF COW'S MILK.*

By E. J. Labbe, M. D.,

PORTLAND, ORE.

Human milk as the baby receives it is a sterile, warm liquid, containing approximately 4.0 per cent. fat, 7.0 per cent. sugar and 1.5 per cent. proteid. Cow's milk is a more or less infected mixture of 4.0 per cent. fat, 4.0 per cent. sugar and 3.5 per cent. proteid.

First then, to start with, cow's milk must be rendered clean and by far the best way of obtaining this is through proper dairy methods, which even ideal cannot render a sterile product. However, clean hands, clean cows, clean surroundings and early chilling of the milk will accomplish a great deal. Mother's milk, even from an unclean nipple, cannot be much infected, as the bacteria are not allowed to grow and multiply between the milking and ingestion.

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*Read before the Portland City and County medical Society, Portland, Ore., Sept. 20, 1911.

Pasteurized cow's milk, while better than the dirty raw article, is, nevertheless, far from the ideal, as the coagulation of the albumins renders the milk more indigestible and we all know, besides, that even dead bacteria have some very potent qualities. Given, then, clean cow's milk, clean, pure water and good sugar of milk, it should be a very easy matter to change the proportions of fat, sugar and proteid of cow's milk to conform to those of mother's milk.

If, for instance, we take 6 oz. of cow's milk and add 10 oz. of water, we have then 6/16 of 4.0 per cent. fat or 1.5 per cent. fat; 6/16 of 4.0 per cent. sugar or 1.5 per cent. sugar; 6/16 of 3.5 per cent. proteid or 1.3 per cent. proteid, approximately right as to proteid, short of cream and sugar.

Top milk, however, contains from 10 per cent. to 16 per cent. fat, with the same amount of sugar and proteid, so that, by using top milk instead of whole milk, the proportions are more easily arrived at. Then, instead of adding plain water, we add a 3 per cent. or 4 per cent. solution of milk sugar and we have our proportions correct.

As mother's milk remains, after the first two weeks, practically the same during the whole nursing period, we have but to stick to this happy mixture and the problem is solved. Unfortunately this is not the case. We have other problems to confront us.

The sugar will give very little trouble as it is in all particulars the exact substitute of the sugar found in mother's milk, is a good food, easily digested, and can from the first be given up to the maximum proportions. This is why so many patent foods are apparently successful, because they are largely made up of this most digestible content.

The fat, however, will give us more trouble. Cream of cow's milk is not such a fine emulsion as is human milk, it is more leathery, is mixed with a proteid which, for reasons I shall speak of presently, makes it so. Saponification is more difficult, pancreatic digestion in a young infant is not very active and, as a consequence, the fat is but poorly taken up from the bowel, so that we have, as a result of too high fat, persistent vomiting and loose bowels containing fat, curds, large masses of soap.

As for the proteid, we have the hardest problem of all. In the first place, the proteid of cow's milk is made up of about 2.9 per cent. casein and .6 per cent. albumin, while that of mother's milk is 1.0 per cent. albumin and .5 per cent. casein. This element, the casein, is a very troublesome one. In mother's milk we have a light flocculent curd, suspended in a large proportion of non-coagulable albumin. In cow's milk we have a tough, large curd with very little free albumin. In the infant the pylorus is a small opening, admitting only a small sized probe, so that a large curd cannot pass through into the bowel. Casein, then, is difficult for the infant to digest, albumin easy and readily absorbed.

The casein of cow's milk may be made more easily digestible in two ways. First, by rendering the milk alkaline, which we do by adding lime-water, citrate of soda, or sodium bicarbonate. delaying coagulation and thus assisting its passage through the pylorus. Secondly, by mechanical means with the addition of some carbohydrates, such as barley-water, oatmeal-water, etc., a second secret for the success of patent foods.

Thus we see that, on account of the difficulties presented by the fat and the proteid, we are compelled to further modify our original proportion of 4 per cent. fat, 7 per cent. sugar, 1.5 per cent. proteid and, with the young infant, start with a 2 per cent. fat and a .5 per cent. or .7 per cent. proteid formula and, as the child grows and assimilation and digestion improve, increase the percentage to meet the demands.

Another thing, no matter how carefully we may have prepared the baby's food, many little incidents will arise to upset our best laid plans. A change of feed in the cows is very likely to be followed by a general upset of the infant, though the milk may still be clean and to all appearances the same as has been fed every day.

Lastly, be it understood that no matter how right we may be in our methods of preparing the food, there are other elements which play an important part in the growth and development of the child. I believe our future success will be along the lines of a more intimate knowledge of the function of the ductless glands, the hypophysis, the thymus and the thyroid.

DISCUSSION.

A. D. Walkey: Dr. Labbe has well brought out the fact, that, as soon as we turn from the maternal lacteal fountain, with its perfect collapsing nursing bottle, to the legion of artificial foods and faulty devices for feeding which, as a rule, succeed only in pumping the unfortunate baby full of wind and mysterious compounds, we are taking upon ourselves all of the troubles of the damned. The modifications spoken of by Dr. Labbe will, at times, fit some cases, but how often have we tried all forms of food and, after the losing battle is fought, our little patient goes where modified milk and experimental percentage feeding ceases from troubling and the weary are at rest.

Dr. Labbe says, "the fat, however, will give us more trouble." I have had less trouble with the fat, or cream. At times the infant thrives on diluted cream alone, better than the milk mixtures. We are told that one-half of the dried residue of an infant at birth is fat, also that "the expenditure of heat in an infant five months old is 130 calories per kilogram of body weight." This being true, we must supply food that will keep up both the fat and heat supply. "The top one-half ounce from a quart bottle of milk contains 3 per cent. of proteid, besides containing the proper amount of fat." (Winters.) This properly diluted and guarded with lime water has been of value, when other foods failed.

The personal equation must always be considered and the fat and proteid digestibility ascertained as near as possible in each case. Then, if we can supply the food that fits the case, we will succeed; otherwise, failure awaits us. It used to be taught that the indigestibility of the paracasein or curd constituted the whole question of artificial feeding. Many authorities now deny this. M. Budin, of France, feeds undiluted cow's milk and claims good results. So far as I can determine we can and do have trouble with both fats and curds. Some babies seem to be able to eat and digest any old thing; others die under the most elaborate, and scientifically compounded foods. Here, again, comes in the personal equation. The modification of cow's milk is a question that, like the poor, will be always with us and, like the poor, will be with us until the scroll is rolled aside and all things are made plain to us in that great future; then we will not need an answer.

TREATMENT OF CHOREA.*

By W. T. Williamson, M. D.,

PORTLAND, ORE.

Sydenham's chorea is probably of infectious or autochthonous origin, chiefly found in early life. In many cases, at least, it appears to be identical with rheumatism. The treatment should be directed more to the individual than to the disease. Rest stands conspicuously first. It may be of any degree, from simply taking the child from school, to a continuous and secluded confinement in bed. Severe cases may also require restraint or a padded bed or a mattress on the floor. Such cases may require hyoscin hydrobromate, gr. 1-200, increased. Or if depressing to the heart, or if the mental disorders predominate, the bromide ammonium may be substituted. Cold sponging or the ether spray along the spinal column, or water of about 65° F. may be dashed upon the spine. The wet pack is also serviceable. In some extreme cases inhalation of chloroform or the use of chloral hydrate and the bromides may be necessary. In milder conditions ambulatory treatment with fresh air and sunshine, still remembering rest and quietude, are in order.

Avoid mental concentration, emotional or other excitement. Give general massage once or twice daily, and when convenient seek lower altitude. Usually omit meat, discard farinaceous foods and sweets as tending to flatulency and cardiac palpitation. Also avoid tea, coffee and pastry. Milk and eggs are usually suitable.

When rheumatic or cardiac symptoms are discoverable give aspirin and sodium salicylate, also tr. strophanthus and, when indicated, digitalis may be used. If anemic, in addition to rest use iron and cod liver oil. If symptoms of autointoxication are present, plenty of water should be ingested between meals. When none of the above special indications are present, the drugs usually depended upon are arsenic, antipyrin and aspirin.

Chorea is essentially a relapsing disease. A prolonged rest is advisable after recovery from the attack. Hypertrophied tonsils favor relapse. All sorts of reflex irritation, as refractive errors, adherent prepuce and nasal disorders should be attended to. Attention should be given to the general nutrition, proper use of hydriatics and exercise, interdiction of excessive mental application and the maintenance of intelligent mental and physical discipline. When the condition tends to chronicity treat the patient as a neurasthenic.

To summarize the treatment, rest, nutrition, elimination, and drugs to combat the symptoms.

DISCUSSION.

William House: The essentials are rest, which is here thrice blessed, then more rest; the best and airiest room in the house, shading it if there be photophobia; nutritious, easily digested food; attention to elimination. At the onset, in addition to a laxative, a mixture of potassium acetate and spirit of nitre for three days, thrice daily. This may be repeated at any time should the urine become acid or concentrated. Since all or nearly all choreic patients are anemic, it is well to administer iron, especially combined with arsenic.

The following is my favorite combination for a patient of fifteen:

℞

Liq. pot. arsenitis............	ʒ i
Ferri et ammon. cit.........	ʒ ii
Elix. aurantii flor.............	℥ ii
Aquae q. s. ad...............	℥ iv

M. Sig. ʒ i in water three times daily.

If improvement does not follow in a week this mixture is cast forth and Fowler's solution substituted in increasing dose to the limit of toleration. When that is reached the dose is cut to just one-half and continued. Negatively be sure to insist that visitors be cut out, undue use of sweets prohibited, and sedatives dispensed with except in cases of unusual excitement when they may be of value.

DIAGNOSIS AND TREATMENT OF ECZEMA.*

By H. G. Parker, M. D.,

PORTLAND, ORE.

The definition of eczema is undergoing so much discussion at present that there seems to be as many classifications as there are workers in this field. When the great conglomerate mass called eczema has been carefully inspected and picked apart, we find in the centre a comparatively small and distinct nucleus which is still formidable enough to be worthy of the name of eczema. Perhaps no other name of a disorder in the whole category of diseases has been so patronized by the medical man as this.

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*Read before the Portland City and County Medical Society, Portland, Ore., Sept. 20, 1911.

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Eczema is a dermatitis, acute, subacute, or chronic. Right here we stop. Every dermatitis should be carefully and thoroughly studied for a cause, an exciting irritant. Many times, with the watchfulness of the patient the producing factor is found: with prophylaxis, cure may be permanent. Children's bodies come in contact with many irritating things daily, from the cleansing of the body as well as the soiling, strong soaps, washing powders, dust, plants, antiseptics, oils, dyes, hard water and many other things too numerous to mention. During the recent turning of hard water into the East side pipes, it has been often mentioned by patients that they were again having eczema bothering them on their hands.

In some of the authoritative centres of Europe the diagnosis of eczema is infrequently made, rather differentiating the cases of dermatitis, classifying them as to cause, leaving those oozing, crusting and itching conditions so commonly observed upon the bodies, faces and scalps of babies under the head of eczema seborrheicum, or a seborrheic dermatitis. Idiopathic cases beginning as an erythema, papular, vesicular or pustular, occurring on a reddened, infiltrated base, accompanied by itching or burning with crusting or scaliness and leaving no cicatrices, are still permitted the name of eczema.

A few only, of the more common and essential diseases of the skin, often confused with eczema will be mentioned. Pruritus, an itching of the skin, but no lesions excepting that produced by scratching.

Scabies, intense itching, but by its localization, history of infection, finding of minute black points upon isolated papules, burrows demonstrated by application of ink and immediate removal of same, and the finding of the itch mite, generally easily settle the diagnosis.

Impetigo should be recognized by its pustular lesions not appearing on an infiltrated base, lacking the itching of eczema, individual lesions scattered about, and the characteristic watery oozing.

Lichen lanus, recognized by irregular polygonal base, its umbilicated or flattened apex, its peculiar dull crimson color, and its sharply defined patches.

Psoriasis, carefully studied, should reveal characteristic white, shiny scales, abrupt border and beef red color, characteristic localization very often showing at elbows or knees, all on extensor surfaces.

Treatment.

Prophylaxis. First in consideration, all possible sources of irritation both external and internal must be carefully looked after. The condition of the alimentary tract should be given close attention, constipation avoided, and the general health kept at the highest standard possible. Long persistent seborrheas and dry skins are apt to lead to the development of eczema. That water is particularly irritating to these tender skins so affected, is recognized by almost every mother. The cleansing of the susceptible parts must be accomplished by either cold cream, benzine or alcohol, or some such agent. The cleaning of the scalps of babies of the so-called milk crust should be done with care, worked off first with applications of sweet oil, then castile soap and warm water.

The list of external irritants from which the child must be guarded is not so large as the one that confronts the adult. Care in the bathing is very essential to those who have a tendency to eczema. No one feature in the treatment of this disease is more important than the feeding. Proper feeding and care of the bowels clears up many an obstinate case of eczema in babies. It is rather the well-nourished or fat baby than the poorly nourished one that develops eczema, the oozing, crusting, itching kinds, seen so commonly, disturbing the sleep and causing a nervous irritable baby—truly pitiful cases. It is not uncommon to see a fat, healthy baby so affected, upon having a slight spell of illness as a diarrhea, purging or due to cathartics, to present a sudden clearing up of the skin disturbance. Often a twentieth grain dose of calomel, three times a day in combination with sugar of milk, for several days, will greatly aid the clearing up of the condition. Water should be freely given; little of acid or alkaline food, fresh air, rest and quiet are essential to a child under such a nervous strain. Scientific baby feeding, upon which subject we are none too well informed, is here of great importance. Teething, probably through its disturbance of digestion, seems to have an aggravating influence upon eczema.

In the treatment of eczema we have both dry and weeping surfaces with which to deal; sometimes we have both within a very small area and each must be treated in a different manner. Moist areas should not be treated in a weeping state with an ointment as, for instance, a zinc paste. This is elementary but it seems to be frequently done. An astringent lotion will dry up the oozing and then an astringent paste will do well, unless the skin will not support an oily dressing, as is sometimes the case. Powders of an astringent character may be dusted on in place of the lotion for drying, as sterate of zinc. Upon the development of new areas it is often expedient to paint them with a ten to twenty per cent. silver nitrate solution, wiping off at once with absorbent cotton. The well known lotion consisting of calamin, zinc oxid, lime water and water is most serviceable for drying, adding glycerin and carbolic acid if necessary, to make the powder adhere and to relieve the itching. If there be a tendency to pus formation or if inflammation seem to be acute, boric acid may be added to the lotion with benefit; ichthyol also.

When crusting is severe, the German for-salbe may be used to soften and remove the crusts; diachylon ointment, sometimes olive oil, liquid petrolatum or mild soap and warm water. When the watery solutions are not well borne, as is often the case in infants, the use of some such preparation as this gives relief; salicylic acid, 10 gm.; liquor plumbi subacetatis, 150 gm. One tablespoonful to half a pint of milk, applied every four hours. Or resorcin may be used with the addition of bismuth subnitrate. Where parts have become purulent and are crusting, boric acid compresses persisted in will clean up the field rapidly.

Upon the dry surfaces Lassar's paste is very helpful. If the skin be easily irritated it is frequently necessary to leave out the salicylic acid. Oil of cade may be added with relief of itching and stimulation. It is generally necessary with infants to dilute Lassar's paste with an equal amount of cold cream or other base. In eczemas of the seborrheic type gradually increasing amounts of sulphur with salicylic acid in ung. aq. rosa gives good results, adding oil of cade if necessary.

DISCUSSION.

J. H. Bristow: In a consideration of the various matters so plainly set before us by Dr. Parker, the first thing that appears in my mind is that, in order to have any success at all in the treatment of eczema, there must be an accurate understanding of all the conditions present, both local and general. Without this one can never hope to succeed. The other thing that appeals to my mind is that the average general worker can scarcely hope to become sufficiently competent to enable him to always successfully cope with this intricate condition. At least it always seemed to me to be intricate.

Eczema occurs very often indeed in children and these cases appear before the family physician, the obstetrician and the pediatrist as well as the dermatologist. There is, therefore, always one or two things that can be done with a considerable degree of success, and that is to see that the general condition of this class of patients is as good as possible, that sanitary and personal affairs are correctly regulated and, if necessary, that tonics and other remedies are carefully administered when needed. Food and the right kind of personal cleanliness are the prime factors in the prophylaxis of this disease. When these simple means fail and the disease seems to refuse to heal, it is well at all times to refer the case to the dermatologist.

THE RELATION BETWEEN DISEASED TONSILS, RHEUMATIC FEVER AND HEART DISEASE.*

By A. K. Higgs, M. D.,

PORTLAND, ORE.

Since Strassman reported thirteen cases of tuberculous tonsils in twenty-one tuberculous cadavers and Wood reported twenty-nine tuberculous and two probable tuberculous tonsils in thirty-four tuberculous cadavers, the tonsils have commanded considerable attention as channels of infection and, in view of the growing interest and exact information on the subject, they have gained a prominence in medical literature that they did not have a few years ago.

The function of the tonsil is a question yet to be settled. Robinson is inclined to believe that it has no function whatsoever, certainly not at birth when it is completely covered over by the plica tonsillaris. The tonsil develops up to the fifth or sixth year, and then rapidly atrophies so that at the age of puberty it has practically disappeared. Therefore, if the tonsil has any function at all, it is between the ages of two and ten years; after that it is a pathologic organ. Goodale found that coloring powder dusted in the crypt was absorbed into the interior of the tonsil, and Peera has shown that bacteria are readily absorbed by the tonsil and that pathogenic germs are more readily absorbed than non-pathogenic. On account of the intimate anatomic relations existing between the tonsil and the deep cervical lymphatics and a short and rather direct route of the venous blood from the tonsil to the right heart, one can readily understand how infectious material in the tonsil can reach the remotest parts of the body and, owing to its location and its being peculiarly susceptible to infection, the tonsil becomes the atrium of infection for many systemic diseases.

The relation between tonsillar inflammation and acute rheumatism has been almost universally acknowledged by clinicians for several years, but it is only of late that it has been pointed out that there is a relation between tonsillitis and various lesions of the heart. Observers differ as to the percentage and as to certain details of rheumatic and heart complications following tonsillitis, but as a general proposition all are practically agreed that there is a relation between them. Although a specific etiologic factor has not been isolated, it is generally agreed that acute rheumatism proper is a specific infectious disease of uniform etiology and that the tonsil is often the portal of entry not only for the articular infection but also for myocardial infection. The offending tonsils are not necessarily large; in fact they are often small and submerged so that they may be overlooked entirely as a causative factor in any systemic affection.

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*Read before the Portland City and County Medical Society, Portland, Ore., Sept. 20, 1911.

Duhing treated seventeen cases of acute articular rheumatism and noted evidences of tonsillitis in all but four and in these there was peritonsillar abscess. Rochinout, of Munich, reports an epidemic which occurred in the Altona Hospital following the admission of a patient suffering with acute articular rheumatism and follicular tonsillitis. From this patient seventeen other patients and a nurse developed tonsillitis. Of the eighteen cases three had acute nephritis, one endocarditis, one pericarditis and one acute myocarditis. Packard, of Philadelphia, reported five cases of endocarditis, each of which had been preceded by tonsillitis and the literature is rich in reports of cases showing the tonsil to be the portal of infection for many other diseases in remote parts of the body.

With these facts before us the question naturally presented is, what is the rational method of procedure to protect the system from further infection? The patient is entitled to protection from tonsillar infection if it can be done without seriously jeopardizing life. Internal medication, cleaning out the crypts and local applications relieve the local inflammatory symptoms in certain cases and some cases may be practically cured by such treatment, but in most cases such measures are wholly inefficient either to relieve immediate symptoms or to ward off future attacks and in such cases one should resort to some surgical procedure.

I would not have you believe that I advocate the removal of all tonsils for I do not, but I do advocate the strictest kind of surgical treatment for the diseased ones. Opening the crypts and cauterizing has proven to be unsatisfactory and it has been shown by abundant clinical experience that decapitation or partial removal of the tonsil does not meet the indications. Decapitation leaves the deep and more diseased part of the crypts and is often followed by recurrent infections and by the reformation of the tonsillar tissue. So far as I know, the complete removal of the tonsil is the only surgical procedure that guarantees protection from infection through the sinus tonsillaris. By complete removal I mean the removal of the tonsil in its entirety with its capsule. Any procedure stopping short of this is often followed by little or no permanent improvement in the condition for which it was done.

Several methods have been suggested and many instruments devised for removing tonsils. Some operators free the tonsil from the pillars of the fauces with the finger and finish the operation with a tonsillotome. Others dissect them out with a common scalpel. Knives, punch forceps, scissors and other instruments have been devised for this special operation and all have their advocates but, in my experience, freeing the tonsil from the pillars with some instrument devised for that purpose and finishing the operation with a snare which carries a coarse wire is the best method. If one is careful to have the tonsil perfectly free from the pillars and will take plenty of time to slowly pull the wire loop home, the tonsil can be removed in its entirety and very little hemorrhage follows.

Selling Bldg.

DISCUSSION.

Boyd M. Richardson: The writer claims that the tonsil has no function and that, if it has, it is between the ages of two and six years. Koplik reports 1284 cases of tonsillitis in children of two years and under; 333 under twelve months, 76 cases from one to five months and 5 cases under one month.

It has been proven that the tonsil has a rotary motion during the act of swallowing. Could not the tonsil be placed in the throat to aid the nursing infant in traction and swallowing, and also to act as an excretory lymph gland and, after this function has been performed, it undergoes physiologic atrophy, as does the thymus?

I believe all tonsils from which sebaceous matter can be expressed are diseased and should be removed completely. There is no chance for argument as to the relationship of tonsillitis and rheumatic fever as I think clinical histories will bear this out. As to the direct relationship of tonsillitis and heart disease I have my doubts. The heart lesion is dependent upon the rheumatism or a general septic condition.

DIFFERENTIAL DIAGNOSIS BETWEEN THE EXANTHEMATA.*

By F. H. Dammasch, M. D.,
PORTLAND, ORE.

In the brief time at my disposal any exhaustive differentiation of the exanthemata is impossible. A few facts may be helpful. The typical case of scarlet fever can never be mistaken. The same is true of measles. Unfortunately for all concerned it is the atypical which most often presents itself, at a time when it is necessary that no mistake shall be made. If one should perchance, diagnose an intestinal rash as measles or vice versa, no great harm will result, for who has not had measles, and how comparatively few are any the worse for it. But with scarlet fever it is far different and with reason more to be dreaded, both for itself and for its complications and sequelae. If, therefore, we can eliminate scarlet fever from our diagnosis we have taken a big step toward allaying the fears of a family or a neighborhood, and safeguarding many who might become sickened with what they thought was an inconsequential ailment.

How can we determine scarlet fever? My first dictum would be, call the health officer, for two reasons. First, let the responsibility be his and, secondly, his experience being supposedly greater than that of a man in general or other special work, he should have less difficulty in reaching a conclusion. I shall not weary you with any symptomatology, except to call your attention to one new symptom which has helped me in some cases.

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*Read before the Portland City and County Medical Society, Portland, Ore., Sept. 20, 1911.

It is called Pastia's sign, and was first described by him in the Archives of Diseases of Children, of Bucharest. He believes it to be as valuable as Koplic's spots in measles. It consists of transverse lines, usually two or three, in the fold of the elbow. They are rose red at first, and in a few days darken, becoming red or wine colored. In severe cases they are ecchymatic. Between the lines the erythematous eruptions characteristic of scarlet fever are seen. Similar lines have been observed in the axilla in a few cases, but they are of less intense color and of shorter duration in that situation. These lines are visible before the rash appears, are seen throughout the eruptive stage, and persist as lines of pigmentation after desquamation is completed.

Pastia found this symptom present in 94 per cent. of his cases of scarlet fever, in the contagion hospital of Bucharest. In his experience, as in mine, it is present in no other of the exanthemata. If the danger of scarlet fever be greatest in the tonsillar stage of the disease, as seems to be the case, and as this sign is present so regularly as it is, its recognition will prove of great value both as a diagnostic point and as a means of preventing the spread of contagion.

DISCUSSION.

J. Allen Gilbert: The following notes will necessarily ignore the usual cardinal symptoms, complications and sequelae:

(1.) Aside from general principles of treatment our knowledge of the exanthemata is confined to diagnosis and even here doubt is often in the ascendancy.

(2.) The exanthem, certain authors to the contrary notwithstanding, is exceedingly helpful in most of the exanthematous diseases. The mucous membrane being delicate, the eruption shows there and often (especially in measles and chicken pox) will enable one to make a diagnosis from 6 to 24 hours before the appearance of the exanthem.

(3.) Of all the exanthemata, scarlet fever probably shows the largest variation in the severity of the disease and character of the eruption, which may even be absent with a following desquamation which clinches the diagnosis. Again, a typical exanthem in scarlet fever may have no subsequent desquamation.

(4.) Sore experience has taught us to put upon the health office all responsibility of diagnosis in all infections leading to quarantine. It may save an enemy and the loss of a patient. Relatives class all non-desquamative cases as errors of diagnosis by the attending physician and their anger against him increases in geometrical ratio with the strictness and length of quarantine.

(5.) Strict, isolated and institutional quarantine should be enforced at the expense of the community.

CURE OF FISTULA IN ANO WITHOUT INJURY TO THE SPHINCTERS.*

By K. A. J. Mackenzie, M. D.,
PORTLAND, ORE.

The object of this study is not to advocate a new method, because it would appear that in the search of new methods in this, as in all branches of surgery, it is found that "there is nothing new under the sun." The writer of late has found a few cases of anal fistulae in which a departure from present standards has seemed to be productive of results, apparently shortening the term of treatment and obviating the disagreeable consequences of the radical operations at present in vogue. The fact that the method has been used mainly in inveterate cases, which in some instances had resisted all manner of topical and operative treatment over long periods of time, furnishes the hope that the method proposed will fit into a large enough number of cases to justify its raison d'etre.

It is not intended to include in the scope of this study all varieties of fistulae that are found affecting the rectum and its neighborhood. Obviously enough it is proper to exclude those forms which are strictly extrinsic and which originate, for example, in diseases of the pelvic bones, diseases of the bladder, prostate, urethra and other contiguous organs and parts which extend very readily to the perirectal tissues and ultimately invade the bowel, simulating very closely the types under consideration. For the same reason fistulae that have a specific constitutional origin are excluded, except the tuberculous forms which afford special indication for the method of treatment herein advocated.

Almost uniformly the accepted treatment of complete fistula in ano consists of the complete division of the structures involved between the two ends of the fistulous track, and in the incomplete forms the rule has been to create a terminal orifice by force either within or without and lay bare the track, forcing the surface to heal by granulation.

In the case of simple, submucous anal fistula the method is without fault. In the varieties of rectal fistula, having their internal terminus without the bounds of the internal sphincter or between the sphincters, the method is also applicable, notwithstanding the fact that even in these cases a partial loss of sphincter control occasionally results. In that group of cases in which the fistulous track has its internal orifice beginning at some point within and above the internal sphincter or in some part of the rectal wall, the effect of the complete section of the structures involved always results in some degree of impairment of sphincter control, causing very often a state in which there is much inconvenience and discomfort, if not abject misery.

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*Read before the Twenty-Second Annual Meeting of the Washington State Medical Association, Spokane, Wash., Sept. 5-7, 1911.

Methods of operation have been devised to obviate these results, but almost without exception the treatment of fistula in ano stands as it stood one hundred years ago. The first and practically the only radical departure from old methods was the complete resection of the fistulous track beyond its bounds and its subsequent suture. This method has been successful in selected cases, generally speaking when the infective process had ceased in a single, direct, fistulous track, rendered sterile through lapse of time. It has failed so often and so frequently made a bad state worse that it is safe to say that the tendency of surgeons is to abandon it. It is absolutely contradicted in infective states and in complex rectal fistulae.

A study of the distribution and direction of rectal fistulae based upon anatomic lines of cleavage is all important in this study. Rectal fistulae undoubtedly originate within and without the bowel. A streptococcus or mixed infection of the integuments covering the buttocks will sometimes penetrate the planes of fascia and, following the trail of lymphatics and vessels and lines of least resistance, lead to the rectal wall and penetrate. That complete and incomplete forms of fistulae with all manner of ramifications may originate in this way is without doubt.

The greatest number of fistulae of the type with which this study deals originate within the bowel, and the internal orifice of the track will be found in most cases at the anorectal junction, generally speaking within the posterior quadrant of the anal ring. The sequence of events is (1) diminished resistance, (2) trauma, (3) invasion of micro-organisms, (4) ulceration, (5) perforation, (6) infiltration of the fat layers, (7) formation of abscess. The spread of the abscess afterward and its final localization determine the fistulous tracks and zone.

It is believed that fully three-fourths of all rectal fistulae originate within the lumen of the bowel. The tendency of fistulae that result from ischiorectal abscesses originating without is to perforate the rectal wall above the level of the external sphincter; whereas, rectal fistulae which result from abscesses originating within the bowel tend to perforate through the sphincters or between them. The submucous and the combined submucous and subcutaneous varieties afford exceptions to this rule, rising as they do at times to high levels in the rectal walls. Stercoral or pressure ulcers are sometimes found in the sigmoid and rectum, which perforate and cause perirectal abscesses.

In the service of a colleague at the present time is a case of fistula, the outer opening of which is in the right groin, the internal opening beyond the reach of the sigmoidoscope, situated probably in some part of the colon. Water forced into the rectum makes its escape freely through the fistulous track. The history of this case makes it evident that the ulcer was the result of chronic constipation.

When an ulcer perforates the rectal wall and an abscess emerges, its course and spread are determined by various factors. If the abscess be small, the resistance strong, and the inflammatory action moderate, it may take a straight course to the surface and point, leading to the formation of a single, straight, direct track which, after a variable period of activity, will contract and form a canal with a dense, limiting, fibrous wall. This is the simplest type of fistula and is amenable to easy surgical cure, yielding readily even to proper topical treatment. Such fistulae as these, because of their accessibility, will often yield to the use of Beck's paste, which obviously enough would not avail in the treatment of the complex forms herein referred to.

The superimposed and concentric arrangement of the fat layers in the buttocks and perirectal region has a very important influence in determining not only the boundaries of any forming abscess, but the direction and distribution of the succeeding fistulous tracks; thus, an abscess which has left the rectal wall may course into the deepest layers of the fat next to the gluteal muscles, and in this plane of fat and connective tissue divide and subdivide into branches, which, turning hither and thither, become lost in blind ends in the fat, giving no evidence of their existence by any palpable or visible signs without,—draining, however, toward the skin and finding an outlet at or near the anal margin. In like manner the abscess may emerge from the point of perforation in the rectal wall in any one of the well-marked layers of connective tissue or occupy each layer definitely.

In other instances the spread and distribution of the fistula is general, with all the fat layers and fossae involved, the whole region then becoming literally honeycombed with fistulous tracks, all draining toward a common point without. This tendency of rectal fistulae to follow definitely the planes of tissue is even seen in the most superficial varieties which are typified in those not uncommon forms in which the abscess and its succeeding fistula are strictly submucous, subcutaneous, or both combined.

In peri, retro and ischiorectal abscesses the lines of cleavage are followed in the same general way. In the first two varieties the abscess may take a course upward and perforate the rectal wall above the sphincter level, or even above the levator ani muscle or course downward and point in the usual situation. In the former event the discovery of the fistulae may be difficult; in the latter they may be mistaken for and incorrectly treated on the same lines as the so-called blind, external fistulae.

The most complex form of rectal fistula is that which on one or both sides of the rectum has branches like the tentacles of an octopus, passing into the various fat fossae surrounding the bowel and burrowing deep into the fat layers covering the buttocks, having, perhaps, only one outlet. This type of fistula, which on the surface may have all the earmarks of a simple fistula, may be approached by a radical process of treatment with a very reasonable prospect of complete cure, but not by the methods commonly in vogue.

The examination of a large segment of the buttock, which was resected for the cure of one of the cases referred to in this study, illustrates in a striking manner the tendency of anorectal fistulae, after perforating the rectal wall, to occupy one or other or all of the fat layers by branching in various directions, at times pointing to the surface, but more frequently terminating in blind ends within the layers occupied, all converging like the branches of a river into one channel. In the same specimen was seen, following the same distribution, many branching lines of cicatrical tissue, showing that some of the sinuses had healed while others seemed to be in the course of a slow process of extinction.

Surgeons who have observed this complex type of fistula will agree that the operative measures in common use not infrequently fail, even when the most radical steps are taken. The reason is plain. If a complete section be made of the fistulous track into the rectum, including the division of one or both the sphincters, and all care is taken to lay bare all visible and accessible tracks, if one of the many branching tracks remain (and it is impossible in many cases to note them all), it may be laid down as a law, and for the most obvious reasons, that the fistula will persist in situ. So often is this result observed, that the fistula under the conditions named could very well be termed the "paradoxical" fistula.

Several cases have been observed, in which apparently very complete operations were performed by different operators and in all the last condition, if anything, was worse than the first, the fistula persisting in loco with some degree of incontinence, a feature of all.

Why does the fistula persist? Plainly the answer is that, whereas the main fistula was properly attacked and a complete section made of the intervening tissue into the bowel, some remote branches or feeders, some distance removed from the field of operation concealed in one or other of the fat layers, remained to determine a relapse of the morbid process. The ultimate result of incontinence in these cases, which was not the result of the first but rather the continuous effect of the later operations, is explained on the ground that the first incision divided the external sphincter completely, and the internal sphincter in part only, leaving enough power in both to control the bowel adequately. The succeeding operations performed in exactly the same region and on the same theory of treatment, dividing more and more of the internal sphincter, of necessity the time comes at last when the remnant of the sphincter is divided, incontinence thereupon resulting.

It will sometimes happen that the abscess on emerging from the rectal wall will invade both sides simultaneously or, if one side alone be invaded, the process may readily extend to the opposite side, causing ultimately a symmetrical distribution of fistulae of the character described in both buttocks. To this group belong the several varieties of so-called horseshoe fistulae, which more than all other forms of complex fistulae require radical treatment.

According to Tuttle, in general hospital practice in this era of advanced surgery, operative failures in a large number of cases investigated amounted to 45 per cent. Proctologists inveigh against these figures and protest that the operations are performed by incompetents, which term includes surgeons, and that in their hands the figures indicating failure would be negligible or nil. Is this true?

Certain facts must be connoted: (1) The divulsion of the sphincter alone is known to cause incontinence, even when done with care and without apparent damage to the fibers of the muscle other than their undue stretching. (2) The single simple section of the two sphincters at a correct angle will sometimes cause incontinence, and there are added dangers when the section of the sphincter is associated with its previous complete divulsion. (3) The single, simple section of the external sphincter alone at a correct angle is also known to cause well-marked incontinence. (4) It is held by competent authorities that incontinence may be caused by division of one or other of the nerves supplying the parts in question. Unfortunately for the force of this particular argument, anatomists have not yet made clear the exact manner of the end distribution of the nerve supply of this peculiar group of muscles. If one could imagine a single nerve trunk reaching a circular muscle like the external sphincter and furnishing half of its circumference with the power of motion and control, one could readily understand that its division could easily be effected by a fortuitous cut properly directed with reference to mere technic ard cause a hopeless paralysis of the part. However strong the asseverations of writers and others that operative failures and incontinence following surgical procedure are a reproach to surgery and a stigma on the particular operator who meets them, the fact remains that there are abundant reasons for their occurrence apart from any system of treatment, and that every surgeon and proctologist, if he will tell the truth, will admit a very considerable percentage of operative failures, and an occasional case of incontinence as long, at least, as present surgical methods are in vogue.

It is thought that one of the factors that has retarded the progress of surgery in the treatment of anorectal fistulae is the paramount position that has been given to the principle of drainage in the treatment of this disorder. A minute study of a fistulous channel with all its ramifications reveals readily that its drainage is usually free, continuous and sufficient, and that once the fistulous track has been established it is not subject to those complications which arise from defective drainage, and that even when the evidence is presented of defective drainage in the presence of a freshly formed abscess, careful scrutiny will show that it was not so much the result of defective drainage as renewed infection or re-infection of a part highly susceptible and continuously exposed to bizarre and multiform infective processes.

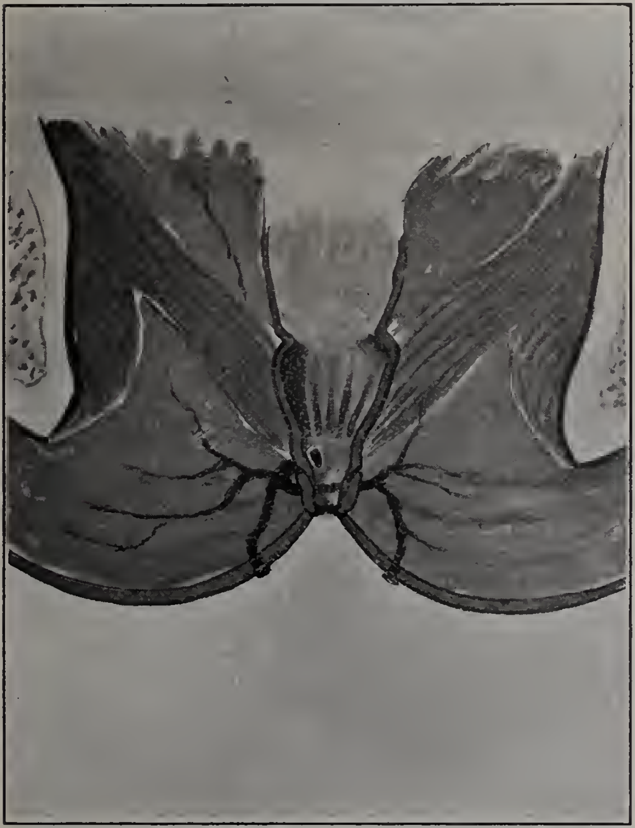

Fig. 1. Sectional view of pelvis showing tendency of anorectal fistula to branch into any one or all of the concentric layers of fat in the buttocks and rectal fossae, and to terminate in blind ends (diagrammatic).

The state of perpetual unrest of the parts is the great predisposing factor and, on the other hand, in certain groups of cases infection is maintained in loco by repeated trauma, while in others infection takes place intermittently by the passage of fresh hosts of organisms from the neighboring bowel.

The principle of drainage is conceded to be paramount in the treatment of all abscesses that develop in the neighborhood of the rectum, and executed properly would in all cases prevent the development of fistulae. It is held, on the other hand, that in the treatment of rectal fistulate, in order to compass their radical cure, the principle of drainage must yield to some means which will do for the relief of fistulae what drainage does for abscess, and this brings us to the consideration of a wider application of the principle of extirpation for the cure of fistula in ano than has been heretofore considered.

It is proposed to proceed by the following steps:

1. The patient is prepared in the most careful way as for any major surgical operation on these parts.
2. The sphincter is completely dilated.
3. The internal orifice of the fistula is minutely examined and with a proper instrument is very cautiously dilated. After dilation the mucosa is uplifted and pared with curved scissors in the direction of the long axis of the bowel, and with a small knife or fine scissors the circumference of the muscular layer is then trimmed and vivified. If need be, the opening may be incised or split in the direction of the circumference of the sphincter. After this has been done a few interrupted sutures of iodized catgut are introduced in the muscular layer at right angles with the sphincter, tied and divided. The mucous membrane is then sutured with interrupted chromic catgut or silk sutures, properly spaced. If more than one orifice exist, of course the same procedure is followed.
4. A flap is made on the side involved, beginning by making a small semilunar incision just beyond the border of the external sphincter, dividing the parts down to the fistulous track, the latter being divided flush at its point of emergence from the bowel. The incision is extended from both ends of the first incision outward and made large and deep enough to include, if possible, under the eye all available and accessible branching tracks. The exigencies of the case may require sometimes the lifting of one or other of the buttocks in its

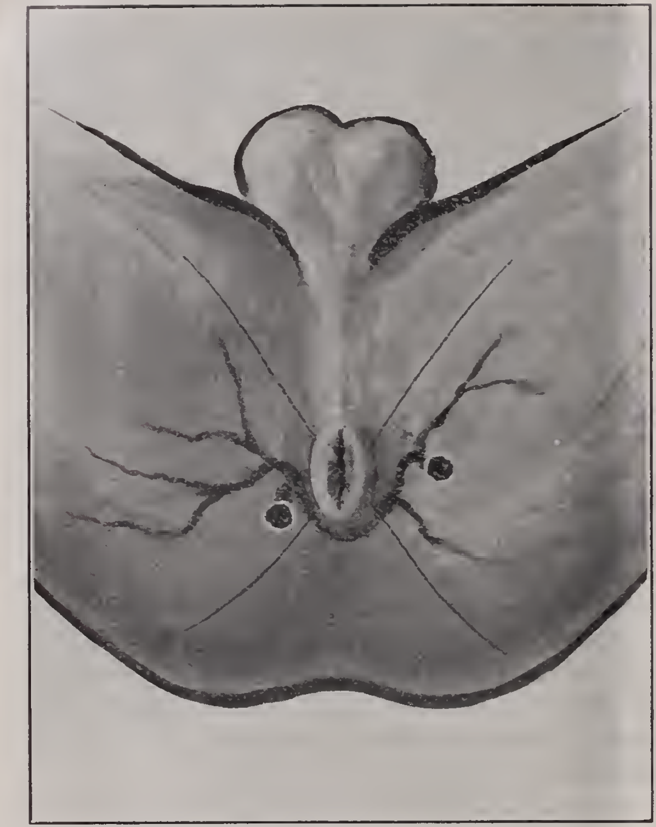

Fig. 2. Proximate and distant branching and symmetrical spread of horseshoe fistula, having two orifices without opening within the bowel. Scheme of flap formation for adapted cases.

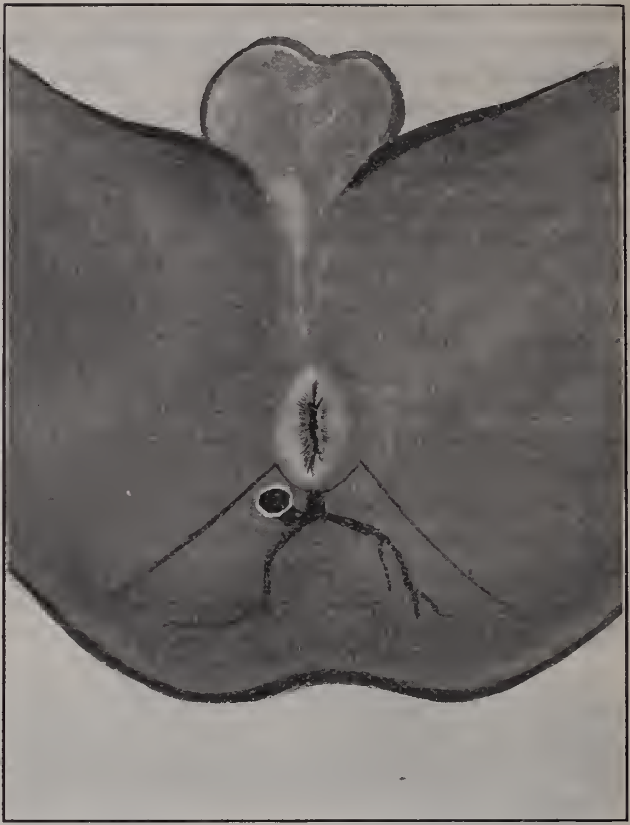

Fig. 4. Complex anorectal fistula tracking backward, branching scheme of flap formation for adapted cases.

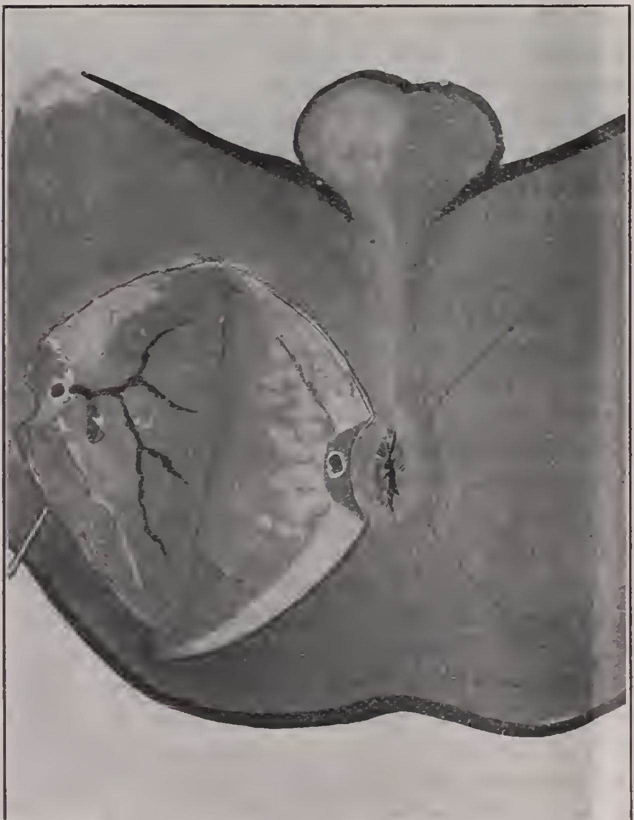

Fig. 3. Trap door flap lifted and fistula with all its branches reflected in the flap. Scheme of extirpation and approach to the outside of the rectal opening of the fistula.

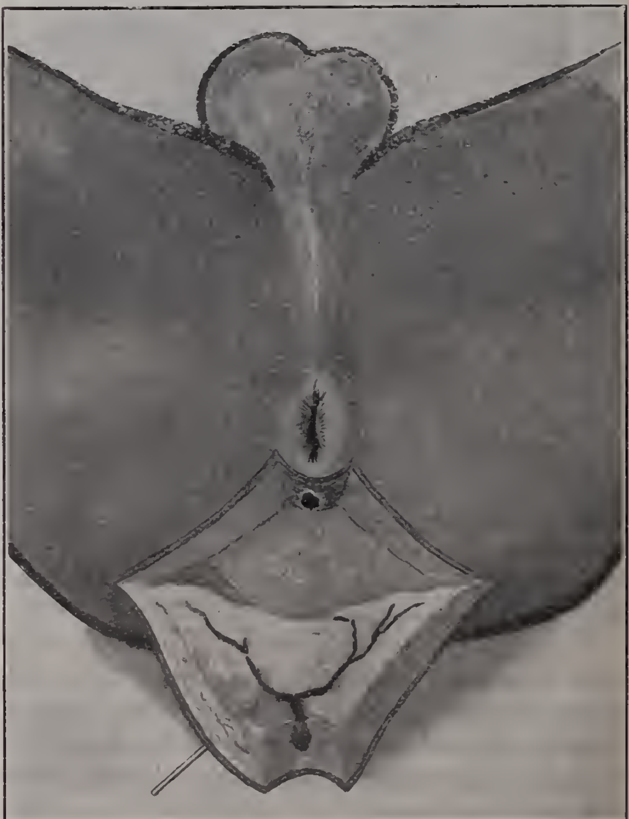

Fig. 5. Flap reflected with contained fistulous tract, preparatory to extirpation.

entirety. In one case, already referred to, it was necessary to make a complete flap and partial resection of both buttocks in order to reach the deepest and most distant branching tracks.

5. The opposite side of the rectal opening is now attacked and, after all doubtful tissues have been removed, the rectal walls are infolded once or twice over the line of suture within. The greatest care must be exercised in removing all doubtful tissues. If need be, the cautery could be used for their complete destruction, or substituted entirely for the suture of these parts.

6. The exposed flap is next attacked with knife or large pointed scissors, curved on the flat, and the original track, its branches and the entire fistulous zone, including every branching track, resected. Careful search will be made in the ischiorectal fossa and perirectal spaces for any concealed tracks.

7. The whole field is then carefully flushed with normal salt solution and, if need be, antisepticized and the fat layers sutured with buried catgut so as to close all dead spaces. In many cases the entire wound may be closed as in the case of breast amputation, or a small drain may be left for twenty-four or forty-eight hours.

Report of Two Extreme Cases of Complete Fistula (inveterate forms) Relieved by This Method of Operation.

Case I. W. G., aged seventy years, Civil War veteran. Developed in 1863 a rectal fistula on which many operations were done from time to time, the condition becoming more aggravated.

Orignal examination, September, 1909, revealed a single rectal gap, with numerous branches extending into the ischiorectal fossae on both sides and over the buttocks, branching under the skin on both sides of the scrotum and, as high up as the groin, numerous openings discharging freely. Partial loss of control.

For relief of this case, which had existed for forty-six years, both buttocks were lifted by large "trap door" flaps and made to include as nearly as possible all branching tracks, resection of the fistula throughout the fat layers in the flap, resection of all subcutaneous tracks with openings without. Suture of the rectum not necessary in this case. Partial resection of both flaps where tissues were unduly undermined. Replacement of the flaps by suture, closure of gaps by plastic procedure, moderate packing of open subcutaneous tracks. Complete healing of the entire area in three months. No recurrence.

Case II. Mrs. J. B., aged thirty-two years. Horseshoe fistula, single opening in the posterior rectal wall at the anorectal junction, tracking backward toward the coccyx and sacrum, and branching into the fat of the gluteal folds, right and left. The condition had lasted four years.

Treated by incision on two or three different occasions. No rectal incontinence. The "trap door" incision made behind the anus by method described, lifting the large flap which contained all branching tracks and scar tissue showing obliterated sinuses; complete extirpation of complete fistula; replacement of the flap; primary union. A slight shallow track developed for a short time, which yielded very readily to moderate use of Beck's paste.

PACIFIC COAST OTO-OPHTHALMOLOGICAL SOCIETY.

After the recent visit of Prof. Fouchs' to the Pacific Coast, the above society effected a permanent association. At the time of its organization forty members were enrolled. It will be made up of practising specialists from Washington, Oregon and California. The society will meet every year in one of these states at the time of the meeting of its state medical association. The first meeting will be held in Washington. To become a member of this society the applicant must present the signature and seal of the secretary of his county society. The dues, $2.50 per year, are payable Jan. 1st. By sending in one's application before Jan. 1st, 1912, he will become a charter member.

Officers for the ensuing year are as follows: President, Dr. John F. Dickson, Oregonian Bldg., Portland, Ore.; Vice-President, Dr. Wm. H Roberts, Pasadena, Cal.; Executive Committee, Drs. Wm. A. Martin, San Francisco, Cal., one year; Henry La Motte, Seattle, Wash., two years; John F. Dickson, Portland, Oregon, three years; Secretary and Treasurer, Dr. Cullen F. Welty, 210 Post street, San Francisco, Cal.

Chronic Pneumonia. Such conclusions as may be drawn from these ten cases of chronic pneumonia are:

1. That they are a possible sequence of acute pneumonia.

2. That they are particularly found in subjects debilitated by some intercurrent condition, but that no single factor such as cardiac conditions, nephritis, arteriosclerosis, alcoholism, tuberculosis, or syphilis is responsible for its production.

3. The onset is extremely irregular in type, and may be acutely febrile, simulating the usual commencement of a croupous pneumonia in subjects of the same age, or typical signs of pneumatic consolidation may be evident without there having been any especial initial pneumonic symptoms, or there may even be no increase in temperature or abnormality of the pulse and respiration rates.

4. The prognosis in such conditions is bad, as not only is death very frequent from cardiac insufficiency, but complications, such as empyema, pericarditis, peritonitis, meningitis, etc., are extremely frequent, and what is very important that any of these conditions may supervene even after long periods of apparent quiescence of the pneumonia.

5. Such conditions may undoubtedly be recovered from as far as symptoms are concerned, yet maintaining physical signs of pneumonic consolidation.

6. Collapse, tubercle, infarcation, and syphilis of the lung, etc., are distinguishable from chronic pneumonia.

7. Once organization processes in the lung have advanced to any marked extent one cannot imagine any complete restoration, as some cicatrization must be permanent.—(Milne, A. M. Journ. Med., S. C. Sept., 1911.)

NORTHWEST MEDICINE
The Journal of the State Medical Associations of Oregon, Washington, Idaho and Utah.
Devoted to the Interests of the Medical Profession of the Pacific Northwest.
Editorial Office, 719-22 Cobb Building, Seattle, Wash.
NOVEMBER, 1911.

EDITORIAL

W. F. HOWARD, M. D.,
Pocatello, Ida.
President Idaho State Medical Association, 1911-1912.

THE IDAHO ASSOCIATION MEETING AT BOISE.

The Idaho State meeting this year was one of the best ever held, so far as the program was concerned, because of the number of papers presenting material of general interest, not to be had from current literature without a great deal of work. And, further, these papers were presented by men in a position to give something helpful from their own practice or investigations. But it is with considerable shame that we note the indifference of the Idaho physicians in the nearby towns and especially those of Boise. This indifference amounts to distinct discourtesy to visiting physicians, especially to those who helped to make the program what it was. Dr. McCormack's work of unifying the profession is practically nullified in communities where so little interest is shown by the members of the profession. This is the first attempt to hold the meeting during a festival of almost state-wide interest. It was hoped this would increase the attendance and bring more physicians of the adjoining territory to enjoy and benefit by the meeting. This hope was not realized. The attendance of local physicians was, if anything, less than at former meetings. We had hoped that Dr. McCormack's address would stimulate more interest in the efforts of the association officers and it certainly would if they had been present, but less than twenty per cent. of the Boise physicians were in attendance to hear him. The value of his address was well expressed by Gov. Hawley, who introduced him, when he said, in effect, in his closing remarks, that he had never heard as much valuable information presented in the same length of time. Our worthy secretary has been fighting this indifference for years. Let the physicians of Idaho wake up and rally to his support, that we may be able to accomplish some of the things that only a united profession can bring about. J. M. T.

DUAL PERSONALITY.

Widespread interest has recently been aroused among the laity as well as the medical profession by the publication in the daily press of Seattle of elaborate descriptions of the patient, thirty-one years of age, recently operated on by Dr. M. C. Sturgis, of that city. The doctor performed a decompression operation for severe intra-cranial pressure. Upon recovering from the anesthetic the patient resumed the incidents of life dating from fourteen years ago, when he received an injury to his head at the hands of footpads. The events of the intervening years seem to be a blank to his mind. His personal characteristics and peculiarities are those of the boy of 1897, totally different from the personality he has displayed during recent years. The case has been received with considerable incredulity by the profession generally, but subsequent developments make it possible this may be one of those rare and unique instances of a dual personality which are often related in the story books but are rarely seen in real life. Dr. Sturgis is thoroughly investigating the history of the man during all phases of his past life. When he has all possible data collected he will publish a full, authentic account of this remarkable case. It will be something worth reading and studying, particularly in its psychologic aspects. C. A. S.

THE CORRECT METHOD OF VENTRO-SUSPENSION.

Frequently articles appear in our journals in which the operator states that ventrosuspension was performed, while analysis of the operation reveals that, whatever the intention, ventrofixation was the ultimate result, and this is occasionally used as an argument against ventrosuspension. Occasionally text-books give such a hazy description of its proper preformance that it would be very difficult for one who has never witnessed the operation to carry it out properly. To call attention to the correct method of performing this operation, in order to keep the method from unfair criticism, for under proper conditions it gives as satisfactory results as any, let us consider briefly Kelly's original publication which appeared in the *Journal of the A. M. A.* December 20, 1895. After median incision and examination of the pelvis he describes as follows: "One side of the incision is then elevated with two fingers, and the peritoneum and subperitoneal fascia caught with a curved needle carrying the suspensory silk ligature. The amount of tissue embraced is about one-third of an inch wide and one-eighth of an inch in depth. The same ligature is then conducted through the uterus on its posterior face below the fundus, and finally through the peritoneum and fascia of the opposite side, when it is tied, bringing the uterus up snugly against the anterior abdominal wall." From this it is seen that muscle fibres should not be included in the sutures and that the peritoneal surface of the fundus should not be pierced by tenacula or otherwise damaged. The crux of the operation, then, is including only peritoneum and subperitoneal fascia in the sutures.

O. B. W.

THE TRI-STATE MEETING NEXT YEAR AT PORTLAND.

The trustees of the Washington State Medical Association have reversed the action of the House of Delegates, taken at the Spokane meeting, and have changed the next annual meeting of the association from Tacoma to Portland. The Idaho association at its meeting last month also voted to meet with the Oregon association next summer. This assures a second joint meeting of these three states. With the well-known medical talent from so many sections to draw upon we can surely expect a program of unusual merit and one which will attract a large attendance from the three states. Judging from the first tri-state meeting held two years ago in Seattle, we can at this early date safely predict that this will be one of the most successful meetings ever held in the Pacific Northwest.

C. A. S.

MEDICAL NOTES

OREGON.

Sex Hygiene. The question of a course in sex hygiene in the public schools has been put up to the school board of Portland. Nothing definite has been decided upon it as yet, the board feeling that it would be better to educate public opinion through the medium of parent-teacher organizations and such public meetings.

Superintendent of Insane Asylum. Dr. R. E. Lee Steiner, who is just completing his first term of four years as superintendent of the Oregon Insane Asylum, has been appointed by the board of trustees to succeed himself as the head of this important institution. This is the second instance of a second-term superintendent, Dr. J. F. Calbreath, now of Portland, having served a second term previous the present incumbent.

Dr. G. C. Bellinger, pathologist at the Oregon State Insane Asylum, has just returned from Boston and other Eastern medical centers, where for three months he has been pursuing laboratory and research work. The doctor reports a very profitable time.

The College of Medicine, of Willamette University, is enjoying a very prosperous year. Dean Dr. W. H. Byrd announces the present class is the largest and perhaps the best in the history of this institution.

Dr. J. C. Evens, fourth assistant physician at the Oregon State Insane Asylum, is enjoying a vacation in the eastern part of the state, and incidentally looking after farming interests located in that section of the country.

Dr. Charles E. Sears, formerly of Wallace, Ida., is at Chicago doing special work in nervous diseases. He had intended leaving for Europe several months ago but on account of the serious illness of his child has been detained up to this time. He is going for a year's study in that specialty. Upon his return he contemplates locating at Portland.

Dr. Wheeler as Health Officer.. The retention of Dr. Wheeler as Health Officer of Portland is commendable and the city is to be congratulated that his resignation was not accepted.

Dr. and Mrs. S. D. Read, of Eugene, had a rather unique vacation trip this summer. They traveled over 800 miles on horseback over a large part of Western Oregon, camping and sleeping in the open. The trip was very enjoyable in spite of a number of hardships.

Dr. J. N. Smith, professor of Theory and Practice in Wilamette Medical College, returned from the seacoast recently, where he had gone to recuperate his health. The doctor is much improved and occupying his usual hours at the college.

Dr. Fred H. Thompson, of Salem, is attending the Thurston County School Institute, which convenes at Olympia, Wash., this month. He is on the program for a discourse on first aid to the injured and on preventive medicine.

Dr. Robert C. Hunt and Miss Anna W. Flynn, of Albany, were married October 11.

Dr. J. C. Baddeley, of Weston, has been seriously ill with typhoid fever at Walla Walla.

Dr. E. G. Kirby, of Elgin, sustained a compound fracture of his left leg, Sept. 29th, as he was trying to get out of his buggy after one of his horses had fallen.

Dr. O. C. Boyer, of Salem, left for Eastern points this month to engage in postgraduate work.

WASHINGTON.

Lodge Practice. Following the spirit of the remarks of Dr. McCormack, the Pierce County Medical Society has adopted a resolution to read out of the society all members accepting lodge practice. Several members have refused the offer of the appointment by the Moose Lodge as lodge physician, saying that the compensation received is absolutely inconsistent with proper professional service to the patients.

New Hospital. A general hospital, in Wenatchee, has been started by the Misses McIntosh and Porter, two trained nurses, who have taken advantage of the need of the city for such an institution. They have closed a long time lease for a residence suitable for their purposes at the corner of Chelan Avenue and Second Street, and have purchased equipment and other necessary supplies to begin work. The local doctors have given the institute their hearty approval.

Examining Defective Children. The inmates of the Eastern Washington Hospital for Defective Children, at Medical Lake, have been thoroughly examined by Dr. A. S. Oliver for nose and throat troubles. Twenty-five per cent. of the inmates are reported affected with physical ailments along this line, and of 90 children 77 were operated upon. The board believes that by restoring the children to health, its work in making good citizens out of them will be greatly facilitated.

Chelan County Society. The North Central Washington Medical Association has been reorganized and is now the Chelan County Medical Society. The change was made because of the fact that practically all of the physicians attending the meeting are from Chelan County and it is thought that a closer organization will be more effective. The following officers were elected: President, Dr. F. E. Culp; vice-president, A. L. Windom; secretary-treasurer, T. H. Grosvenor; delegates to the State Medical Association, H. B. Haskell and R. T. Congdon; censors, Drs. C. Gilchrist, Zener and Siebert.

The Puget Sound Sanitarium, a private institution for the care of the insane, located at Steilacoom, will be moved to Puyallup soon, the management having purchased 18 acres of land, including the large Sands residence. Dr. Waldo Snoke is at the head of the institution.

Dr. E. C. McKibben, of Vashon, dislocated his left shoulder and was considerably shaken up in a collision between his buggy and an automobile. The doctor was driving over one of the country roads after dark when an automobile appeared so suddenly that he was unable to turn out of the way. The auto was running without lights and was entirely to blame for the collision.

Recommendation of a National Department of Health. The Wenatchee Commercial Club has recently passed the following resolution: "Resolved, that this body endorses the establishing of a national department or bureau of health and recommends that our delegation to Congress use every effort to secure the establishment of same."

It is said that the league of medical freedom has been very busy in the city of Wenatchee, but they have apparently not made great headway with its commercial bodies.

New Commissioner of the State Board of Health. Upon the resignation of Dr. Heg, the Washington State Board of Health recently elected Dr. E. R. Kelley, of Seattle, as commissioner of health. The doctor has already served for a number of years as assistant commissioner.

Drs. A. E. Stuht and J. A. Balsiger, of Colfax, have moved to Spokane, where they will have offices together in the Traders block. Dr. Stuht resigned his position as health officer and states that the health matters of the county are in excellent condition. Dr. J. F. Tifft has purchased Dr. Stuht's residence.

Dr. F. P. Witter, of Spokane, and Miss Lillian P. Eastman were married October 11, at Sandpoint, Ida. Dr. and Mrs. Witter will take a short trip to the coast cities, after which they will return to Spokane.

Dr. Bert Thomas, of Walla Walla, had a narrow escape when his automobile was struck by a street car on October 15. The doctor had backed out of his yard, and on account of trees could not see the car, which was approaching at a high rate of speed. The auto was demolished but the doctor escaped with a few bruises.

Dr. F. R. Hedges, of Everett, has been operated upon for appendicitis and has now fully recovered.

Dr. I. A. Mitchell, of Chelan, has sold his practice to Dr. J. R. Harvey. Dr. Mitchell's hearing has been affected for some time and he wishes to have more time to devote to the treatment of it.

Dr. A. D. Snyder, of Davenport, has been chosen manager of the Lincoln County Fair.

Dr. F. A. Harlow, of Bremerton, after serving for a year as mayor, has decided to quit politics and complete his education. He will take up postgraduate work at Stanford, where his daughter is now attending college.

Dr. Paul Smits has leased the Aberdeen General Hospital to Dr. I. R. Watkins and others and will take a much needed vacation.

OBITUARY.

Dr. Wilhelm Jenner died in Seattle, Wash., October 11. He was born in Germany 68 years ago. He came from a family of physicians. His paternal uncle was the family physician for some years of Emperor Wilhelm I, of Germany. He became a student in the University of Jena, in 1869, and graduated at Munich, in 1872. He was a resident of the gynecological Poliklinik, in Munich, until 1873. Until 1877 he was a surgeon for the Hamburg-American line of steamships. Then he returned to Berlin for study under Lassar. He located in Stillwater, Minn., in 1880, and came to Seattle in 1890, remaining in that city until the time of his death. He was a man of kind and gentle disposition and is remembered with gratitude by many to whom he did acts of charity. He was a well-read physician and versed in the scientific progress of medicine.

Dr. William O. Prosser, of Eugene, Ore., died July 1, at Wesley Hospital, Chicago, where he was operated on for abscess of the brain. He was born at Lunenburg, Ont., in 1850. In 1870 he received the degree of A. B. from Albert College, Belleville, Ont., and in 1874 the degree of M. D. and M. C. from McGill University. In 1875 he was made a member of the College of Physicians and Surgeons of Ontario. After a number of years of practice in Canada, he studied abroad and in 1881 received the degree of L. R. C. P. E. and L. R. C. S. E. from the University of Edinburg. After serving in several hospitals in England, he returned to America and practised for fourteen years at LeMars, Iowa, and for five years in Superior, Wis. In 1903 he came West for his health and located in Eugene, where he practised until his death.

Dr. C. L. Nichols died at Portland, Oregon, September 26, from anemia after an illness of three years. He was born in 1861, at Waterford, Minn. He graduated from Amherst College in 1883 and later took his medical degree at Hahnemann Medical College, Philadelphia, after which he studied diseases of the eye and ear in Vienna. He came to Portland in 1885, where he practised until the time of his death.

Dr. Luther M. Perkins died at Tacoma, Wash., September 27, from locomotor ataxia after an illness of several years. He was born fifty-six years ago in St. Genevieve County, Missouri. He obtained his medical degree from the Missouri Medical College at St. Louis, and was afterward a member of the faculty in that institution. He came to Tacoma several years ago and practised until the condition of his health caused him to retire.

REPORTS OF SOCIETY MEETINGS

IDAHO STATE MEDICAL ASSOCIATION.

PROCEEDINGS OF THE NINETEENTH ANNUAL MEETING OF THE IDAHO STATE MEDICAL ASSOCIATION, HELD AT BOISE, OCTOBER 11-13, 1911.

Wednesday, October 11.

MORNING SESSION.

The nineteenth annual meeting of the Idaho State Medical Association convened in the rooms of the Boise Commercial Club, and was called to order at 11:30 a. m. by the president, Dr. John W. Givens, of Orofiuo. The following members and visitors were present during the session:

J. W. Givens, Orofino.
F. W. Mitchell, Blackfoot.
D. P. Higgs, Soldier.
William House, Portland.
G. W. States, Franklin.
E. F. Root, Salt Lake City, Utah.
L. P. McCalla, Boise.
J. W. Gue, Caldwell.
S. W. Forney, Boise.
R. L. Nourse, Boise.
J. E. Crouch, Payette.
Ralph Falk, Boise.
E. A. Pierce, Portland, Ore.
C. N. Sutter, Walla Walla, Wash.
D. D. Drenuan, Rathdrum.
J. C. O'Day, Portland, Ore.
S. B. Dudley, Weiser.
R. W. Matson, Portland, Ore.
J. W. Cannon, Boise.
S. A. Calouge, Nampa.
W. T. Williamson, Portland, Ore.
Minnie F. Howard, Pocatello.
J. E. Daugherty, Desmet.
J. N. McCormack, Bowling Green, Ky.
C. M. Kline, Boise.
Ed. E. Maxey, Boise.
Geo. E. Hyde, Rexburg.
Jacob Prinzing, Ontario, Ore.
A. C. Behle, Salt Lake City, Utah.
J. M. Taylor, Boise.
D. W. Matthaei, Arco.
J. R. Numbers, Boise.
W. H. Tukey, Boise.
E. R. Steiner, U. S. A.
Adolph Blitz, Boise.
Mary E. Johnston, Boise.
C. J. Smith, Pendleton, Ore.
Frank E. Brown, Council.
M. A. Calloway, Boise.
V. R. Killen, Heyburn.
C. S. White, Portland, Ore.
Frank Hinman, Spokane, Wash.
Wilson Johuston, Spokane, Wash.
H. P. Ross, Nampa.
T. E. Martin, New Meadows.
W. F. Howard, Pocatello.
E. F. Guyon, Montpelier.
R. L. Glase, Boise.
John Boeck, Boise.
O. W. Hall, Star.

The committee on arrangements reported that the physicians of Boise extended an invitation to the members and visiting physicians to attend a banquet at the Owyhee Hotel Thursday evening.

Address of Welcome. The Hon. Harry K. Fritchman, mayor of Boise, welcomed the association and visiting physicians to the city, and in his most cordial manner assured the wearers of the red-cross badges that they had the freedom of the city and perfect immunity from molestation by the police.

On behalf of the association and visitors, Dr. Givens responded to the mayor's happy welcome, thanking him and assuring him of the association's appreciation of his kind words.

President's Annual Address. The president announced that in so much as his address dealt largely with matters of interest to the general public, it had been suggested that its presentation be deferred until this evening and given at the meeting arranged for Dr. McCormack.

Medical Inspection of Schools. By Dr. George E. Hyde, president Idaho State Board of Health, Rexburg. This paper was discussed by J. M. Taylor, President J. W. Givens, L. P. McCalla, E. F. Root, A. C. Behle, F. N. McCormack, G. W. States.

AFTERNOON SESSION.

Problems in Sanitation in the Indian Field Service. By Dr. J. E. Daugherty, of Desmet. This paper was discussed by President Givens and A. Blitz.

The Science of Life. Whence is it? What is it? By Dr. Mary E. Johnston, of Boise. The origin of life can only be explained by the creative act of God, as given to us in the Bible.

Goiter, Especially Exophthalmic Goitre. By Dr. E. F. Root, Salt Lake City. This was discussed by L. P. McCalla, J. W. Givens and E. F. Root.

Brain Tumors, with Special Reference to Diagnosis. By Dr. William House, of Portlaud, was the next paper read.

Thursday, October 12.

MORNING SESSION.

Therapeutic Pneumothorax. By Dr. J. Chris O'Day, of Portland, Ore. This paper was discussed by Drs. Pierce, Suttner, Matson, Behle and Maxey.

The Importance of Intestinal Rest in Dealing with Acute Intestinal Conditions. In the absence of the author of this paper, Dr. Coffey, the president called upon Dr. C. N. Suttner, of Walla Walla, to address the association on this subject. He said, in part, that he considered this subject to be of prime importance in the treatment of these cases of acute intestinal inflammations. He preferred to consider the subject under four headings. First should be considered psychologic rest, the avoidance of all things that may tend to excite the patient, and by doing that which will encourage him and inspire confidence and make the patient believe he is going to get well. Secondly comes mechanical rest. Complete relaxation of all muscles, with supports under knees and back. All this can be best carried out in a hospital, and the people should be educated up to the necessity of sending these cases to the hospital. Still he thought it wrong to take these acute cases long distances, especially in improper conveyances, for many appendices are ruptured in transit to hospital. Better operate in the patient's home than do him a serious injury in trying to move him. Hospital beds should be so constructed that the patient can be moved and changed without disturbing him. Under a third heading may be considered physiologic rest. Don't feed these patients. A little chewing gum or good chocolate candy will satisfy and keep them busy. Opiates are seldom necessary. A hypodermic of sterile water will usually act just as satisfactorily. He commended the use of normal saline, by Murphy method, and recommended the use of the Gilliam bed in giving these salines. He gives the saline before operation as a preparative treatment. Fourthly, surgical rest may be discussed. This is brought about by the use of a proper surgical bed, a comfortable operating table, with warm aseptic cushions or pillows for propping patient while on the table. He spoke of the benefit secured from the Fowler position, but to make this a comfortable one the gluteal regions must be supported to keep the patient from slipping. In summing up he said the best way to give surgical rest in these cases is to do what is necessary and no more. Often a case can be drained under local anesthesia—quinine and urea had been used by him satisfactorily. Much of the treatment of these cases depends on having a competent and reliable nurse.

Dr. McCalla concurred in most of the remarks of Dr. Suttner. He emphasized the necessity and beneficial effects of rest, and insisted that total absence of food was of the greatest importance. He never feeds intestinal operative cases for at least ten days. Any patient can be sustained for this time on saline enemas. He also used this method in acute inflammatory conditions of intestinal tract in children. Did not approve of giving these cases even chewing gum or chocolate candy, because even these produce peristalsis. Opiates were condemned but thought it better to use them than to allow patients to have food of any kind. Said he never allowed fluids of any kind by mouth after operation on the stomach as did some operators, but preferred the saline enemas.

Dr. O'Day said it was not the peristalsis that we should fear in these cases as much as it was the ileus. If there is no ileus peristalsis does no harm. Laxatives should not be given, but instead wash out the stomach and rectum, and let the ileus alone. Of course all foods should be withheld.

Afternoon Session.

Some Phases of the Modern Treatment of Tuberculosis. By Dr. E. A. Pierce, of Portland. This paper was discussed by C. J. Smith, C. S. White, R. W. Matson, Wilson Johnston, L. P. McCalla, S. B. Dudley, J. E. Daugherty, J. M. Taylor, W. T. Williamson, J. W. Givens.

The Pituitary Body and Its Importance to the Surgeon. By Dr. August C. Behle, of Salt Lake City. This paper was discussed by Wilson Johnston, Frank Hinman, William House, L. P. McCalla, E. F. Root, J. C. O'Day, A. C Behle.

Friday, October 13.

Morning Session.

Observations in the Treatment of Syphilis with Mercury and Salvarsan, Controlled by the Wassermann Reaction. By Dr. Ray W. Matson, of Portland.

Discussion: Dr. Frank Hinman said he had had considerable experience with the Wassermann reaction, but up to now had been doing the Noguchi modification of the original Wassermann test, which he considered as reliable as the Wassermann. Statistics seem to show that the Noguchi test is positive in one to two per cent. of negative cases, and the Wassermann is negative in one to two per cent. of positive cases, so by using both methods we should be able to make a more positive diagnosis in doubtful cases. Whichever test is used, both are equally difficult and only experts can get reliable results. Many technical errors are possible and tests must often be repeated, even by experts. Said he was glad to learn that it was not dangerous to allow a patient to walk out soon after making injection of salvarsan.

Dr. W. F. Howard reported a case showing definite clinical secondary symptoms with negative Wassermann, in which "606" gave prompt relief of symptoms. Asked how he was to know when this case is cured.

Dr. Matson, in closing, said the danger in using "606" was slight if the contraindications, such as organic heart or kidney disease, are properly observed.

The Principles of Specific Therapy, by Frank Hinman, of Spokane, was the next paper read. Discussed by Drs. Matson, Daugherty, Givens, Behle and Hinman.

Youth and the Sex Problem. This was an address by Dr. W. T. Williamson, of Portland. He said, in part, that he thought children had a right to expect their parents to inform them concerning their sexual functions and the part sex plays in the scheme of life and procreation of our kind. It is impossible for children to develop to full adult life without acquiring this knowledge, and it is far better to have this information properly given them by responsible persons whom the child has been taught to respect and love, than to have him acquire this knowledge from improper persons under unfavorable conditions. It is our duty as parents to protect the young from the evil influences of others and from their own ignorance. Many boys and girls become victims of disease and immoral practices because of their lack of knowledge on this subject, and the great question is, how shall we educate our children. He said they had recently organized a society in Portland for the purpose of discussing this problem and carrying on a campaign of education among the people. As the parents have apparently manifested no interest in this subject it is proposed that the physicians lend their aid in instructing the parents and teachers how best to reach the children. In the schools it ought to be easy to begin this study early in the child's school life by unfolding to him or her first the life plan of plants and the lower animals, and in a gradual manner explain and lead up to procreation and the relation the sexes bear to Nature's scheme of life.

In the study of this question it has been found that several social conditions exist which tend to further the evil consequences of this lack of knowledge of the sex question. First, there is an economic condition existing, especially in the larger cities, where many young girls work in department stores, shows and offices. Most of them are underpaid, yet expected to appear neat and well dressed, and many of these go wrong, first through ignorance, and then because the leading of such immoral life enables them to have nicer clothes and get more enjoyment from their leisure hours. Secondly, many boys and girls are allowed to roam the streets at night. Enforcement of the curfew ordinance would in a great measure remove this source of temptation. Indiscriminate dancing is a third social condition found in all large towns and cities. Young men and especially young women and girls should not be allowed to attend public dances, where they are apt to meet undesirable acquaintances, without proper escort. And, lastly, the present-day young man is brought up under the shadow of what may be termed four sexual lies: (1) that gonorrhea is no worse or to be dreaded more than a severe cold; (2) the setting up of two standards of morality—one for the girl and a less exacting one for the boy; both sexes should have the same standard of morality; (3) that self-abuse is ruinous and destructive to health and moral stamina, it being a well-known fact to physicians that self-abuse is almost universally practised by boys and that it is not so serious in its effects as the quack advertisers would have the boys believe in order to separate them from their money; and (4) that sexual intercourse is necessary for perfect health.

It is proposed to correct all these undesirable conditions so far as possible by education of the people. Ignorance is also undoubtedly to blame for a great deal of the sexual diseases afflicting men and women. Most of the operations done upon women for pelvic disease is due to venereal disease. This is not surprising when we consider that probably 75 per cent. of men have been infected with gonorrhea in early life, and that from 5 to 18 per cent. of men have suffered from syphilis. Now most all of these infections are the result of ignorance and may be traced to improper sexual relations, though it is not impossible to become infected without intercourse. So we are all in more or less danger from the general prevalence of these diseases.

The address was quite freely discussed by Drs. House, Hyde, Dudley, Givens, Mary E. Johnston, Minnie F. Howard, Hinman, Williamson, and several teachers and club women present and the subject was finally left with the understanding and expectation that steps would soon be taken to organize a society for the study of sexual hygiene.

Mrs. Judge Truitt, of Moscow, president of the Women's Federation, appealed to the association for its endorsement of their effort to secure compulsory inspection of schools by a competent health officer and, on motion by Dr. Taylor, the committee on legislation was instructed to assist the ladies in every way possible in their fight for a law providing for medical inspection of schools.

Some Case Reports, by Dr. W. F. Howard, of Pocatello. Owing to the lateness of the hour, and with the consent of the author, this paper was read by title and ordered printed with the transactions.

New Members. The following applications for membership having been referred to committee on applications and reported back favorably by the committee were, on motion of the secretary, elected to full membership, subject to payment of membership fee: Dr. J. E. Crouch, Payette; Dr. R. C. Bull, Caldwell; Dr. Dewitt P. Higgs, Soldier; Dr. G. W. States, Franklin; Dr. John E. Daugherty, Desmet; Dr. D. W. Matthaei, Arco; and Dr. Roy Faust, Deary.

Amendment to By-Laws. At the 1910 meeting of this association the following amendment to by-laws was proposed by Dr. Maxey: "Amend Section 1, Article V, of the By-Laws so that it will read as follows:

"Article V. Meetings of the Association. Section 1. The Idaho State Medical Association shall hold its annual meeting at such time and place as the association may at each session determine, and special meetings at such time and places as may be determined by the Governing Board."

On motion by Dr. Maxey, the above amendment was passed in due form.

After considerable discussion (pertaining to location) a resolution was unanimously passed favoring a state sanitarium for the treatment of tuberculosis; the committee on legislation was instructed to endeavor to secure such legislation, and the president was instructed to appoint a committee of three, two members and one lay person, to secure and distribute data of an educational character favorable to such legislation.

On the last named committee the president-elect appointed the following named persons: Dr. John W Givens, of Orofino; Mrs. Bowerman, of St. Anthony, and Dr. L. P. McCalla, of Boise.

The Annual Report of Secretary-Treasurer. (In the excitement of winding up the business of the session this report was forgotten. For the information of the members the secretary takes the liberty of inserting it at this place for publication.)

Membership. The association has three district or auxiliary societies in viable condition—the South, and North Idaho District Medical Societies, and the Twin Falls County Medical Society. The Kootenai-Bonner-Shoshone Counties Medical Society seems to be dead, at least I can get no report from them. I understand steps have been taken to try and reorganize the East Idaho District Medical Society or a local society at Pocatello, but at the time of writing this report I have no official report on the matter. The high price of living or some other condition has caused a marked falling off in the amount of dues collected this year. The South Idaho District Society has a total membership of 74, but only 33 have paid 1911 dues. The North Idaho District Society has 24 members on its rolls and only 11 have paid dues for 1911. There are 25 members at large or not affiliated with any local society, 12 of whom have paid their 1911 dues. So there are all together 119 members in the state association, but only 56 members in good standing. I must urge the members to be more prompt in paying their annual dues if they expect to have the official journal sent to them regularly, for it is not justice to the association to carry these delinquent members for months on the journal subscription list which, under the postal laws, we are compelled to do.

Address by Dr. J. N. McCormack. I have assumed the responsibility of asking Dr. McCormack to give us three of his popular addresses in Idaho, one at Pocatello, October 9; one at Boise, October 11, and one at Lewiston, October 14, and I have every reason to believe you will commend my action in having him come to us again.

Financial Statement.

Balance on hand as per last year's report	$384.36
Received from North Idaho Dist. Med. Society	33.00
Received from South Idaho Dist. Med. Society	133.50
Received from Twin Falls Co. Med. Society	3.00
Received from members direct as follows—	
Dr. T. C. Hollister, membership fee	5.00
Dr. L. E. Hanson, dues 1910	5.00
Dr. F. H Poole, dues 1911	5.00
Dr T. R. Mason, dues 1911	5.00
Dr. E. S. Prindle, dues 1911	5.00
Dr. A. R. Cutler, dues 1911	5.00
Dr C. M. Kline, dues 1911	5.00
Dr H. A. Castle, dues 1911	5.00
Dr. J. E. Daugherty, membership fee	5.00
Dr. D. W. Matthaei, membership fee	5.00
Total receipts	$603.86

Disbursements.

Subscriptions to Northwest Medicine	$115.75
Stationery	33.65
Postage	21.50
Commercial Club, 1910 meeting	84.00
Stenographer's services	12.15
New Typewriter	60.00
Telegrams	1.65
Badges for this meeting	7.25
Total disbursements	$335.95
Balance on Hand, October 10, 1911	$267.91

ED. E. MAXEY,
Secretary-Treasurer.

Election of Officers. The committee on nominations submitted the following nominations and recommendations:

President, Dr. W. F. Howard, of Pocatello.

Vice-president, Dr. John Boeck, of Boise.

Secretary-treasurer, Dr. Ed. E Maxey, of Boise.

Chairman committee on arrangements, Dr. Ralph Falk, of Boise.

Chairman committee on legislation, Dr. J. R. Numbers, of Boise.

Chairman committee on public health, Dr. G. E. Hyde, of Rexburg.

Chairman committee on publication, Dr. Ed. E. Maxey, of Boise.

Chairman committee on nominations, Dr. O. H. Avey, of Payette.

Journal trustee, three years, Dr. R. L. Nourse, of Boise.

Associate editor of Journal, Dr. J. M. Taylor, of Boise.

We recommend that the next place of meeting be at Portland, in conjunction with state associations of Washington and Oregon, as a tri-state meeting, at such time as shall be set for that meeting.

We urgently recommend that the secretary be allowed $150 per year for his services.

Respectfully submitted,
J. M. TAYLOR,
R. L. NOURSE,
Committee on Nominations.

On motion the report of the committee on nominations was approved, the nominees declared elected, and the recommendations were adopted.

On motion a resolution of thanks was extended to the Boise Commercial Club, the Episcopal Church, Boise High School, the governor, and the mayor, for their assistance in making this meeting a success.

No further business appearing, the association adjourned.

ED. E. MAXEY,
Secretary.

OREGON.

MARION COUNTY MEDICAL SOCIETY.

Prest., W. B. Morse, M. D.; Secty., G. C. Bellinger, M. D.

The Marion County Medical Society held its regular meeting on Tuesday evening, October 17, at Salem, Ore. The following members were present: G. C. Bellinger, G. V. Ellis, E. E. Fisher, H. J. Clements, R. E. Kleinsorge, F D. Lewis, O. B. Miles, W. B. Morse, J. R. Pemberton, W. C. Smith, J. N. Smith, B. L. Steeves, R. E. Lee Steiner, A. E. Tamiesie, F. H. Thompson, J. O. Van Winkle, L. F. Griffith. J. O. Matthis, of Monmouth, was a visitor.

An amendment to the constitution of the society, changing the time of the annual meeting from October to January in order to conform with the year of the state society, was adopted.

The invitation of the Central Willamette Society to meet with them in Albany on December 7 was accepted.

PAPER.

Arteriosclerosis of the Brain. Dr. A. E. Tamiesie, of Salem, read this paper. Earnest study shows that diseases of the circulatory system have existed as long as history. Our present knowledge has been brought about by a better understanding of toxins, nervous control, variations in blood pressure and the secretions of the ductless glands. A thinning and weakening of the walls of the vessel by atheromatous change give rise to small and numerous aneurysmal dilatations often observed in the brain. Circulating toxins from any source whatsoever are a common cause of the disease. Syphilis produces a specific form. Heightened blood pressure is an important premonitory, as well as a constant, symptom. Local arteriosclerosis, especially of the brain, is quite common and hard to explain. Development of the condition produces altered blood supply and disturbed nutrition, and there is a growing tendency to explain many conditions by it, such as premature senile changes, apoplectoid attacks, melancholia, vertigo with headaches, etc. Profound dementia may result and death complete the course from exhaustion, unless apoplexy occurs. Osler states that the clinical picture often resembles stages of general paresis. Among the insane this is quite common. In making the diagnosis the palpable arteries, albuminuria and the blood pressure should be kept in mind. Retinal examination may furnish a valuable objective sign. In treatment the hope lies in prophylaxis. Careful consideration of the complex of causes is necessary. Judicious use of vasodilators tend to make life more comfortable and hold the distressing mental conditions in check.

Discussion: Dr. Clements: The tendency now is to eliminate alcohol as a cause though it is no doubt toxic in origin and, since syphilis produces it so typically, we may often think of unrecognized syphilis in many of these cases. The recognition of arteriosclerosis is very important and should be carefully looked for in spite of its absence in the palpable arteries.

Dr. J. N. Smith: Arteriosclerosis is of vast importance and would furnish a good subject for a public meeting. Roger says that it is the disease of civilization and that not one person in fifty has supple arteries at the age of forty. It is a nearly universal trouble coming to the just and unjust. Diphtheria is a common cause in children. Do not think syphilis is the cause. Intense abdominal pain may be from sclerosis of mesenteric arteries.

Dr. Kleinsorge spoke of the frequency of cases with hard arteries and no symptoms.

Dr. Steeves: Arteriosclerosis is undoubtedly one of the causes of old age. Occupation may bring about a senility at forty, twenty years ahead of its time. The eye fundus shows arteries sclerosed in all marked cases.

Dr. Thompson: Arteriosclerosis may be adding its part to the symptom complex and we should take the blood pressure more frequently in our practice.

Dr. Griffith: Cases where the lesion is evident but presents no particular symptoms are interesting. They are especially evident in those who labor hard, and the general stiffness of these people is really due to the disease. Summing up the cause as civilization and syphilization is probably quite near the truth.

Dr. Tamiesie, in closing: Would dislike to believe that all who show this disease are syphilitic. Vascular spasm is of interest in connection with the study of early cases.

At the conclusion of the program the society adjourned to meet Tuesday, October 31.

WASHINGTON.

KING COUNTY MEDICAL SOCIETY.

Prest., G. B. McCulloch, M. D.; Secty., H. E. Coe, M. D.

The regular semi-monthly meeting of the King County Medical Society was held in the Assembly Room of the Chamber of Commerce, Seattle, Wash., October 2, 1911. The meeting was called to order by the president, Dr. McCulloch, at 8 p. m., about 75 members being present. The minutes of the last meeting were read and approved.

PAPER.

Duodenal Ulcer. O. F. Lamson gave a very able paper on this subject, treating the subject under the following heads: etiology, varieties of ulcers, symptoms, differential diagnosis, indications for operation, illustrative cases.

M. Sturgis read a discussion sent by K. Winslow which called attention to the following points: Only 10 per cent. of all chronic stomach troubles are surgical and so for a diagnosis careful examination is necessary with special reference to organs other than the stomach. Careful history and attention to symptoms are of more value than laboratory findings, which should be considered only as an aid in diagnosis. It is doubtful if chronic ulcer ever heals and so operation is indicated whenever diagnosis is reasonably certain.

A. T. Heavenrich cited several illustrative cases, laying special stress upon medical treatment. He believes that pyloric spasm is responsible for much pain and that patients frequently have pain for a long time after operation.

F. L. Horsfall called attention to the following causes: burns involving a large surface of the body; uremia and tuberculosis, and stated that duodenal ulcer may be present in very young children. In differential diagnosis special attention should be paid to the time of the onset of the pain, its character, effect of food and referred pains. He would not wait for extreme symptoms before operating.

C. E. Hagyard presented a report of four cases of duodenal ulcer, prefaced by a brief statement of the clinical picture and concluding with Mayo's statement that 98 per cent of duodenal ulcers may be either cured or greatly relieved by operation.

In the discussion, E. O. Jones stated that laboratory methods are an aid, but should not carry too much weight. He thinks that the small area of tenderness is characteristic. Not all gastric ulcers require operation but the chronic fibrous form will not yield to medical treatment. He does not consider it necessary to excise a duodenal ulcer.

F. L. Horsfall presented a case of carcinoma of the rectum. He gave a history of the case and showed the good results following operation.

The secretary read a letter from the Catholic Social Betterment League offering the services of Miss Kershaw as visiting nurse to the members of the society for the care of their sick poor.

A. T. Wanamaker and A. L. Cook were elected to membership; A. C. A. Gaul became a member by transfer from the Chicago Medical Society.

The Board of Trustees of the Washington Medical Library Association presented a request that those members of the society who are taking foreign periodicals send the names of the same to the secretary of the board.

The second regular semi-monthly meeting of the King County Medical Society was held in the assembly room of the Chamber of Commerce, October 16, 1911. The meeting was called to order by the president, Dr. McCulloch, at 8 p. m., about 95 members being present. The minutes of the last meeting were read and approved.

Clinical Cases.

Multiple Osteomata. Walter Gellhorn presented this case, giving the history and showing a number of radiographs.

F. J. Fassett, in discussion, stated he had seen two similar cases, one in an adult and one in a child. In the adult the features were the same as in the boy presented at this time. Operation should be simply for the removal of bony deformity which causes limitation of motion and it is not usually necessary to remove the head of the bone. The bony tumors show a thick covering of cartilage. There is no growth after adult life is reached so he would advise postponement of operation if possible until the growth of bone stops.

Papers.

Basic Principles in the Treatment of Specific Urethritis. A. C. Crookall gave this paper, speaking of the indifferent treatment of the subject by text-books; general failure to apply the abundant scientific data already available; pathology and theory of treatment; treatment of the several stages; value of silver nitrate.

Manifestations of Gonorrhea in the Female. Minnie Burdon read this paper, speaking of the order of involvement of parts of the genito-urinary system; symptoms of acute and chronic infection; symptoms of infection during pregnancy; treatment in detail.

Gonorrhea in Infancy. A. H. Gray gave this paper, treating it under the following heads: ophthalmia neonatorum; varieties; etiology; diagnosis and symptoms; complications; treatment; gonorrheal stomatitis; gonorrheal vulvovaginitis.

In opening the discussion, J. S. Thomas emphasized the importance of microscopic diagnosis. Bad results are very frequently due to too short treatment which even in favorable cases should often last six weeks; difficulty in obtaining absolute rest, which is essential; self-treatment should be discouraged; misuse and bad results of strong astringents.

In discussing Dr. Burdon's paper, L. C. Irwin spoke of the importance of diagnosis of the disease in the female; minute directions necessary for the care of the person; bacterin treatment is good in the vaginitis of children; necessity for tact in dealing with cases; the patient should be impressed with the necessity of continued treatment.

H. La Motte does not agree that corneal ulcers necessarily mean blindness; should keep pus away from contact with the healthy cornea; avoid scraping the epithelial layer from the cornea by rough treatment; use simple irrigation of potassium permanganate for twenty minutes at a time for ophthalmia neonatorum.

L. H. Redon spoke of the danger of over-treatment and considers potassium permanganate and silver nitrate the most essential drugs. He spoke of the great difficulty of making the patient realize the importance of continuing treatment after the discharge stops.

R. J. O'Shea, in discussing the disease in the female, considers rest in bed the most important part of treatment. He uses a swab of 25 per cent. silver nitrate for the vagina and follows with gauze pack. Urethritis should be treated with medicated bougies. In some cases he uses pyroligneous acid in the vagina daily. Treatment of Skeene's glands is important and he uses an injection of 25 per cent. protargol. He considers stock bacterins worthless.

H. J. Davidson outlined a course of abortive treatment which he considers very efficient, consisting of very frequent injections of 2 to 5 per cent. silver nitrate. He uses normal saline instead of water in potassium permanganate irrigations as being less irritant. He would give the patient instructions for self-treatment.

Marriette Marsh Armstrong stated that in cervicitis with abundant discharge a tampon or pack should not remain in longer than six hours, the object being to keep the diseased surface as dry as possible. A permanganate douche should be used and the parts dried when the tampon is changed. Urethritis should be treated by internal medication.

G. W. Swift does not approve of the fifteen minute treatment of ophthalmia neonatorum. It requires eight hours' contact of gonococcus with the cornea to produce ulceration. Gentle irrigation with two litres of 1-20,000 potassium permanganate every six hours will remove the infected plugs of mucus from the conjunctival folds.

R. M. Purman reported a case of postpartum gonorrheal endocarditis which was cured by bacterins.

G. B. McCulloch stated that he had found dry packing of the vagina the only way to cure gonorrheal vaginitis in children.

A. C. Crookall considers any abortive treatment a matter of luck. He objects to polypharmacy and the use of self-treatment.

A. H. Gray agrees that any manipulation of the eyes in children lowers resistance and favors infection.

E. J. Stubbs, F. G. Ulman and P. A. Turner were proposed for membership in the society.

PIERCE COUNTY MEDICAL SOCIETY.

Prest., J. R. Brown, M .D.; Secty., E. O. Sutton, M. D.

A special meeting of the Pierce County Medical Society for the purpose of considering lodge contract work as affecting the society, was held at the Tacoma Hotel, on the evening of September 25. Nearly everyone present took part in the discussion of this vital subject, the sentiment of the society being altogether adverse to lodge practice. A committee was finally appointed to investigate conditions as they obtain in the City of Tacoma and the County of Pierce, and to make an exhaustive report at some subsequent regular meeting of this society.

The regular meeting of the Pierce County Medical Society was held October 3, at the Tacoma Hotel.

Papers.

Salpingitis in Children. This paper was read by Dr. Gammon. The doctor presented in detail a case history of salpingitis in a child, bringing up and elucidating the points of diagnosis and citing that in his case, as demonstrated by laboratory examination, the cause was typhoid fever. The discussion was opened by Dr. Brobeck. General discussion.

Observations From Six Months' Work as City Bacteriologist, was read by Dr. C. Stuart Wilson. He gave in detail the large amount of work which had been done in his office during the time he has served as city bacteriologist, pointing out the improvement in certain directions, particularly with regard to the milk supply of the city, and he also took occasion to call the attention of the profession to the large proportion of diphtheria cultures which proved negative. Dr. Wilson believes that this is due in a certain measure to imperfect technic in taking the culture, calling attention to the fact that the diphtheria bacilli are most frequently found at the edge of the membrane and that in taking the culture this part should be swabbed particularly. He also requested that swabs be returned at the same time the culture is turned in, so that in case of a suspicious or negative finding, the swab may also be examined. Adjournment.

The regular meeting of the Pierce County Medical Society was held at the Tacoma Hotel, October 17.

The program consisted, first, in a general discussion of lodge contract work and preliminary report from the committee appointed at a previous meeting to investigate this subject, and a request from them for an extension of time, amounting to two months, in which they purpose to make a very exhaustive study of the conditions here.

Paper.

The Use of the Obstetric Forceps, was read by Dr. Charles McCreery. He pointed out, after a general resume of the subject, that the forceps should in all cases be applied two hours after the complete dilatation of the cervix, if no progress is being made. He also uses chloroform to a point just short of surgical anesthesia. This was a most excellent paper, dealing with a practical question in a practical way. The discussion was opened by Dr. Swearingen. General discussion. Adjournment.

WHITMAN COUNTY MEDICAL SOCIETY.

Pres., W. C. Cardwell, M. D.; Secty., J. E. Else, M. D.

The Whitman County Medical Society met in the office of Dr. MacGregor, in Garfield, Wash., Monday evening, Oct. 16, 1911. Present were Drs. Boyd, Palouse; Cardwell, Colfax; Devine, Elberton; Else, Pullman; Palamountain, Colfax; Stevenson, Palouse; Wiesel, Garfield; Dix, Garfield; MacGregor, Garfield; Simonson, Lacrosse; Aspray, Moscow; Hinman, Spokane; Mr. A. C. Mills, Spokane, and Mesdames Boyd, MacGregor, Wiesel, and Dix.

The secretary read a telegram from Dr. Matson, stating that it was impossible for him to be present, and a letter from Dr. Love asking this society to express its desire as to whether the next meeting of the state society be at Tacoma or should our state society join with Oregon and Idaho in a joint meeting at Portland. Moved, seconded and carried that it be the sentiment of this society that the state society should join in the joint meeting at Portland. Dr. W. H. Warner of Farmington and Dr. C. J. Simonson of Lacrosse were proposed as members. The Board of Censors reported favorably on both and on motion the secretary was instructed to cast the ballot of the society for their admission.

The following amendments were proposed to the by-laws and were laid on the table to be voted upon at the next meeting:

Article 1 shall be so amended as to read: The regular meetings of this society shall be on the third Monday of January, April, June, August, and October.

Article V shall be so amended as to read: Membership fee for this society shall be two dollars. The annual dues for each active member of this society shall be three dollars, to be paid on or before the meeting in January. One dollar of such dues shall be used to defray expenses of this society and two dollars shall be forwarded to the secretary of the state society by the secretary of this society.

Dr. Else presented casts made from a case of diffuse hypertrophy of the alveolar processes.

Dr. Cardwell in delivering the annual presidential address advocated a closer union of the profession with more charity toward each other. The physicians with the exception of the ministry show more charity to the laity than any other profession and less to each other. If we cannot say a good word about a brother physician we should say nothing at all.

Papers.

Tuberculosis. Dr. Hinman in an address upon this subject, stated that the most important thing in combating it was the education of the people. Next in importance is an early diagnosis. The most important item in the treatment is rest. Climate has but little influence. Tuberculin has been greatly abused and has probably produced more harm than good. He believes that it is of great value when properly used. The principle upon which immunization depends is not well known. He thinks that tuberculin does not contain all of the toxic substances produced by the tubercle bacillus.

In the discussion Dr. Cardwell stated that he had no faith in the treating of the cases that persisted in staying at home as they would go contrary to instructions. Dr. Boyd related his experience with some cases where temperature persisted while in bed but disappeared upon getting up. Dr. Aspray emphasized the importance of rest. Dr. Stevenson emphasized the difficulty of treating patients at home. Even if they do stay in bed they worry about home affairs. He thinks that sanitariums should be established in every county. Dr. Else believes that a case of tuberculosis should receive the treatment of a specialist the same as a case of appendicitis requires the attention of a surgeon. He thinks home treatment unsatisfactory and called attention to the movement on foot to get the next legislature to enact a law permitting counties to establish sanitariums for the treatment of tuberculosis

Typhoid Fever. Dr. Wiesel presented a thorough paper upon this subject. He advocated the isolation of the patient with protection from flies, and thorough disinfection of all excreta. Regarding drugs there are many used but few that do much good. He believes in feeding the patient.

In discussion Dr. Boyd stated that he believed in giving the patient practically no food. He reported cases of very short duration and believes that the reason for their being short was because they had no food. Dr. Aspray believes in feeding. He stated that in some cases that would not yield to cold sponging he had got good results by sponging with a hot soda solution. Dr. Cardwell believes the patients do much better by feeding. Dr. Palamountain feeds his cases. Dr. Else believes that the prophylactic measures are the most important. He called attention to the excellent results that have been attained at North Yakima. Rest is an important factor in the treatment. As to feeding he believes that patients do much better when fed judiciously.

The Treasurer's report, presented by Dr. Else, showed the total receipts for the year to be $187.88 and the expenditures including dues to the state society to be $111.11, leaving a balance of $76.77. On motion the report was accepted.

The following officers were elected for the ensuing year: President, J. W. Stevenson, Palouse; vice-president, G. M. MacGregor, Garfield; secretary-treasurer, J. Earl Else, Pullman, and board of censors, W. B. Palamountain, Colfax; Geo. T. Boyd, Palouse, and W. N. Devine, Elberton. The place of the next meeting was fixed at Palouse. The society then adjourned to an excellent repast served by the Garfield physicians.

BOOK REVIEWS

Edited by Kenelm Winslow, M. D.

A Manual of Practical Hygiene. For Students, Physicians and Health Officers, by Charles Harrington, M. D., late Professor of Hygiene in the Medical School of Harvard University. Fourth edition, revised and enlarged by Mark W. Richardson, M. D., Secretary to State Board of Health of Massachusetts. Octavo, 850 pages, with 124 engravings and 12 full-page plates, in colors and monochrome. Cloth, $4.50, net. Lea & Febiger, Philadelphia and New York, 1911.

The difficult and delicate task of bringing this work up to date has been sympathetically and yet fearlessly carried out by the present editor. The total additions enlarge the book about 75 pages. Among the more important additions are: A resume of the entire question of bovine tuberculosis in relation to man; accounts of typical epidemics of typhoid and scarlet fever due to infected water, milk and food; the giving of U. S. government standards of purity under the pure food law for various food products; the new classification of proteids; very radical changes in the entire section on milk; additional information in regard to preservatives and adulterants in wines and beers; and a very thorough revision of the entire chapter on sewage disposal.

In way of criticism it might be urged that the entire subject of garbage collection and disposal would seem worthy of more exhaustive treatment, particularly from the standpoint of the city of 20,000 population and under. Description of systems applicable to New York are of very slight assistance to a health officer in a city the size of Wenatchee. The subject of medical inspection of schools has been thoroughly discussed in special volumes and monographs, yet it would seem that some reference to the subject would be valuable in a work of this character. There is a brief but quite comprehensive chapter on military hygiene, but no word on the problems that health officers are facing daily in many sections of the United States on the sanitation and regulation of civilian industrial camps. It is the opinion of the reviewer that the chapter on tropical hygiene could have been omitted with advantage and the space given to something else. It is most surprising to read over the chapter on occupational hygiene and not find an outline at least of the most valuable and complete system of sanitary factory supervision which the present editor personally directs. Criticism along these lines might be carried out indefinitely. Is not the time ripe for the compilation and writing of a system of private and public hygiene and preventive medicine in this country, designed primarily for the use of health officials? It is the reviewer's belief that it is, and he knows of no one more capable of carrying out such a task than the present editor of Harrington's Hygiene. KELLEY.

Diseases of the Stomach. With Special Reference to Treatment. By Charles D. Aaron, Sc. D., M. D., Professor of Gastroenterology and Adjunct Professor of Dietetics in the Detroit College of Medicine; Professor of Diseases of the Stomach and Intestines in the Detroit Post-Graduate School of Medicine, etc. Octavo, 555 pages, with 42 illustrations and 21 plates. Cloth, $4.75, net. Lea & Febiger, Philadelphia and New York, 1911.

In this work are to be found chapters on the following topics: Physiology of digestion, examination of the stomach contents, diet in gastric diseases, artificial food preparations, lavage of the stomach, massage, electricity, hydrotherapy and mineral waters, medications, indications for surgical treatment. This last chapter is an innovation and one to be commended. In some respects the reviewer can not agree with the author's statements in this chapter. Thus he affirms "three-fifths of all gastric ulcers are situated at the lesser curvature on the posterior wall of the stomach, a surgically inaccessible place." Such ulcers are present on the lesser curvature in 90 per cent of cases (Wm. Mayo), but three-fifths are not situated on the posterior surface and those on the posterior surface are not inaccessible by the transgastric method of approach. Aaron advises against operation in uncomplicated ulcer, but why wait for such complications as cancer and perforation. Under indication for operation in cancer Aaron regards "retention the most important symptom." The discovery of tumor is as important and often an even earlier sign. Chapters follow on enteroptosis, motor neuroses, sensory neuroses, nervous dyspepsia and secretory neuroses, gastritis (acute and chronic), gastric ulcer, hemorrhage, erosions, arteriosclerosis, syphilis, tuberculosis, and tumors of the stomach. The book is essentially a practical one. The greater amount of space is given up to treatment. Only sufficient attention is devoted to etiology, symptomatology, pathology and diagnosis as is required to make the methods of treatment intelligible. In the discussion of treatment all important methods of different authorities are mentioned which perhaps may lead to some doubt as to which is the most valuable.

Stomach trouble, caused by other diseases as tuberculosis, arteriosclerosis, syphilis and astigmatism, are considered, but no consideration is given to even more common causes of stomach trouble, as chronic appendicitis, cholecystitis and numerous other diseases. Even under hypersecretion this etiology is not acknowledged and the condition is regarded as a neurosis, except in so far as it accompanies ulcer. Chronic hypersecretion is now regarded by the highest authorities (Fenwick) as being only symptomatic of organic diseases, as cholecystitis, appendicitis, cancer, pancreatic disease and tubercle of the cecum, in addition to ulcer. The book is of chiefest value in containing the fullest description of all the methods at our command for treating stomach troubles, from the viewpoint of the gastrologist, and owing to its practical nature should meet with great success. Winslow.

Progressive Medicine, Vol. XIII, No. 3. September 1, 1911. 319 Pp. Paper. $6.00 per annum. Lea & Febiger, Philadelphia and New York.

In this volume we find the following subjects: diseases of the thorax and its viscera, by Ewart; dermatology and syphilis, by Gottheil; obstetrics, by Davis; diseases of the nervous system, by Spiller. There are several recent additions to our knowledge of extraordinary interest in this invaluable quarterly. Thus is fully discussed Yandell Henderson's acapnial theory of shock and respiratory arrest, which has created such a profound impression on the surgical world. The theory postulates that pain, or irritation of afferent nerves under anesthesia, causes excessive breathing and O accumulation in the blood (hyperpnea) with proportionate lack of CO_2 (acapnia). Since CO_2 is *the* respiratory stimulant, respiratory arrest or apnea results. Then O in the venous blood soon becomes exhausted and death ensues because of the need of O by the tissues and because of stagnation of blood in the veins—as the tonus of the tissues depends upon a proper amount of CO_2. Anesthesia lowers the sensitiveness of the respiratory center for CO_2. So if anesthesia follows pain, the two combined make a most unholy alliance—both leading to apnea. This knowledge impresses many new, practical facts of importance upon us. Thus is explained the frequency of deaths after tonsil and adenoid operations. Intermissions of pain and repetition of anesthesia, so often laid to the convenient status lymphaticus. There is great loss of CO_2 in covering the bowels repeatedly with hot compresses, and these are to be avoided. The use of CO_2 inhalations are coming into vogue and the theory is well supported by animal experiments by many men.

Fisher's work on the etiology of edema is also of intense interest. He refutes the old idea of mechanical pressure within the capillaries but shows that the condition is due to degeneration in the capilliaries from faulty nutrition caused by lack of oxygen from poor circulation; that from this arises acidosis bodies. These lead to hydremia of the cells, as it is a well-known chemical fact that cells soak up water in the presence of acid.

Gottheil considers in extenso the relative value of salversan and takes a very conservative view of its much lauded value. He affirms the superiority of intramuscular method of administration. He considers the rapid elimination and difficulty of technic of the intravenous method as contraindications. We certainly cannot subscribe to this. Space will not permit of further notice of the many engrossing subjects treated in this book. Winslow.

The Practical Medicine Series, 1911, Eye, Ear, Nose and Throat. Edited by Casey A. Wood, C. M., M. D., D. C. L.; Albert W. Andrews, M. D.; Gustavus P. Head, M. D. 12 mo. cloth, 364 pages, illustrated. $1.50. The Year Book Publishers, Chicago.

The work consists of a review of the past year's literature in ophthalmology and oto-laryngology, with copious abstracts from leading articles supplemented by notes from the editors. Under head of ophthalmic therapeutics the pros and cons of "606" in eye cases are presented quite fully and some space is given to tuberculin treatment of eye affections. Dr. C. T. Cooke's skiascope is fully described under new instruments. A quite complete and very interesting account is given of the permanent and traveling ophthalmic hospitals in Egypt for treating trachoma in the natives. Some 16 pages are devoted to quoting an acrimonious correspondence detailing differences between Lt. Colonel Smith and Major Kilkelly, of India, on the subject of the Smith cataract operation, most of which appeared in the Ophthalmic Record last year. We think once was enough for this unfortunate matter to appear in print. The recent agitation on optometry legislation is presented quite fully and should be read by all physicians. Autogenous vaccine therapy in chronic middle ear suppurations, widening the dental arch for septal deviations, the surgical significance of nystagmus and vertigo, the bacteriology of colds and vaccine therapy in the treatment of same are interesting features of the part of the book devoted to the ear, nose and throat.

Seelye.

Textbook of Chemistry. By Alfred Curtis Hill, M. S. M. D., Professor of Applied Chemistry in the Medical Department of the University of Colorado, etc., etc. Second revised edition; 114 illustrations, half-tone and colored plates; 659 Pp. Cloth, $3.25. F. A. Davis Co., Philadelphia, Pa.

This is a valuable addition to the text-books on chemistry. The volume shows a vast amount of research and compilation and contains a vast amount of information, both theoretical and practical, for students and analysts along pharmaceutic, sanitary and physiologic lines. The scope of the work is very extensive and can be best indicated by the chapters which are as follows: Medical physics, chemic philosophy, inorganic chemistry, the carbon compounds, qualitative and quantitative analysis, incompatibility, sanitary chemistry, toxicology, physiologic and pathologic chemistry and clinic chemistry. The chapter on physiologic and pathologic chemistry is especially interesting. It contains many of the newer ideas and theories upon these interesting subjects. The arrangement of subjects and selection of illustrations are excellent. Jacobson.

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The Journal of the State Medical Associations of Oregon, Washington, Idaho and Utah

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DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF THE PACIFIC NORTHWEST
Subscription Price $2.00. In clubs of twenty or more $1.00.

Entered March 14, 1903, at Post Office, Seattle, Wash., as Second Class Matter, under Act of Congress of March 3, 1879.

VOL. III. New Series. DECEMBER, 1911 No. 12

ORIGINAL CONTRIBUTIONS

SURGICAL TREATMENT OF EXOPHTHALMIC GOITER.*

By Martin B. Tinker, S. B., M. D.

ITHACA, N. Y.

There have been so many contributions on goiter which have appeared during the past few years that a complete discussion of the subject would consume very much more time than is available for a single paper. Certain topics concerning goiter are of great interest to all of us and I shall limit myself to brief consideration of four questions of general interest.

(1) Is surgical treatment for exophthalmic goiter a logical form of treatment? If this be conceded,

(2) When should surgery be advised?

(3) What should be done?

(4) What results immediate and permanent may be expected?

The symptoms of exophthalmic goiter are those of a general systemic poisoning not unlike the symptoms of many forms of poisoning by narcotic drugs. I have frequently compared the symptoms produced by oversecretion of the thyroid to those produced by the overuse of tobacco. Overuse of tobacco produces grave circulatory disturbances: rapid, sometimes irregular heart action and a weakened pulse. The circulatory disturbances from over-secretion of the thyroid are very similar. The overuse of tobacco influences the nervous system, causes tremor, general unrest, sleeplessness; so does hyperthyroidism. Overuse of tobacco frequently influences vision, causing tobacco amblyopia. Although the symptoms are not exactly the same, hyperthyroidism also decidedly influences vision.

Both tobacco poisoning and thyroidism also cause muscular weakness, loss of weight, sometimes nausea, vomiting or diarrhea; also irritation of the respiratory tract and frequent cough. The symptoms of hyperthyroidism can be produced in healthy persons by overfeeding thyroid extract or the fresh gland itself of sheep or other animals. It would not be considered logical to treat tobacco poisoning by the use of drugs or other therapeutic measures without stopping or at least reducing the use of tobacco. If the symptoms of goiter be produced by oversecretion of the thyroid, is it not equally logical to take measures to check and reduce the oversecretion?

Besides the evidence furnished by the fact that the symptoms of hyperthyroidism can be produced in healthy persons by feeding thyroid extract, we also know that the symptoms can be relieved by partial excision of the thyroid. It is true that the symptoms are temporarily aggravated by manipulation of the thyroid and throwing into the circulation an excess of secretion during operation but, if this stage be safely passed, the patient is invariably relieved by removal of a part of the oversecreting gland. Furthermore, the symptoms are relieved by other measures which reduce the activity of thyroid circulation, such as rest in bed, local application of cold or by tying one or more of the thyroid arteries. These facts lead many of us who have witnessed the great benefits of thyroid surgery to believe that operative treatment is the only logical treatment for many of these patients.

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*Read before the Thirty-Seventh Annual Meeting of the Oregon State Medical Association, Portland, Ore., July 10-12, 1911.

The next question of importance is, when should surgery be advised? There has been a great tendency on the part of medical men to delay in referring their patients for surgical treatment. In many cases this policy has continued until the patients have reached the stage in which surgery was very dangerous or indeed entirely out of the question. There is, I believe, a growing tendency on the part of our distinguished internists to refer their patients earlier for operation. It seems to me that this question has been as satisfactorily answered by Osler (Principles and Practice of Medicine, 6th edition, pages 767-768), as by any recent authority. ''After three months careful treatment, if the patient is not better the question of surgical treatment should be considered.'' Osler also says: ''A certain percentage of cases get well (under medical treatment), but when the disease is well advanced recovery is rare. The disease is serious enough to warrant strong measures systematically carried out. Much valuable time is lost in trying various remedies.''

It would certainly seem evident to all that patients should be referred for surgical treatment before irreparable damage has been done to the heart and circulatory system. If we estimate the amount of energy required by the heart to pump the blood as equal to that of opening and closing the hand, we will see how great the strain on the circulatory system really is. These patients' hearts are beating from 40 to 80 times a minute more rapidly than normal. If we were to open and close our hand forcibly 40 times a minute, not many minutes would be required to convince us how great is the extra burden on the circulation. Is it any wonder that these patients' hearts are almost invariably dilated, aside from the influence on the myocardium by the poisoning of thyroid oversecretion.

It is also important that relief be obtained before the nervous system has suffered so severely as to be beyond the possibility of complete repair. Not only do these patients suffer from sleeplessness and unrest; there seems to be little doubt that extensive organic changes occur. Crile believes that such changes can be demonstrated in the brain cells. The mind even may be affected. The superintendent of one of our largest New York State Hospitals for the insane has told me that there are always a considerable number of goiters among the insane and he believes that the thyroid oversecretion has an important influence in these cases. There seems to be no good reason why it should not have very much the same influence as poisoning from alcohol or syphilis, which are admitted causes of insanity in a considerable number of cases. Not infrequently surgical treatment would be advisable while the diagnosis of the average practitioner is neurasthenia or heart disease. It is important that treatment be undertaken early to prevent further trouble, quite as much as to cure the symptoms which may exist.

The third question, What should be done in case of surgical treatment is decided upon, will be answered most intelligently after a thorough, comprehensive, preliminary study of the patient's condition. Not all patients suffering from exophthalmic goiter in severe form should be operated upon at once and not all who are operated upon should undergo the radical operation. The situation in goiter surgery is quite different from that in abdominal surgery. It is not necessary that the entire operation should be completed at once. In the toxic cases a simple ligation of one of the thyroid arteries is all that can safely be done. Further treatment will depend upon the progress of the patient. Sometimes another artery is tied. In other cases, the gland is exposed and removed at a later time. In any case the condition of the patient should be estimated as accurately as possible and we should keep within the limits of safety. In our preliminary study, the value of the differential count and coagulation time has recently been emphasized by a number of writers. It would probably be unwise to operate in a doubtful case of exophthalmic goiter unless the characteristic blood picture were present. The reaction of the patient to excitement or exertion, also, is an important indication of his ability to withstand operation. Just how much excitement or exertion is advisable in any given case must be decided by the physician in charge, but in any case this reaction to fatigue, what I have sometimes termed the fatigue test, is of great importance.

In most cases the use of local anesthesia is highly important, whatever operative measures may be considered advisable. The careful estimate of what can safely be done, use of local anesthesia and the many stage operation are, in my opinion, the most important factors influencing the safety of surgical treatment for exophthalmic goiter.

The fourth question, what results may we expect, both immediate and permanent, is of great interest to physicians and surgeons in charge and of greater interest to the patient. In most cases the results are extremely gratifying. In 167 consecutive operations which I have recently reported at the Los Angeles meeting of the American Medical Association, there were no deaths, although the condition of many of the patients was desperate at the time of operation. These were not selected cases, the only patients who were refused operation having died within from twelve hours to three weeks of the time when they were first seen. These were medical deaths, not in any way influenced by surgery. The results depend in considerable degree upon the thoroughness with which postoperative treatment is carried out.

Prolonged and complete rest is a most important factor in postoperative treatment. Rest in the recumbent position reduces the amount of work on the heart about thirteen times from that when the patient is about and active. Complete and prolonged rest is necessary if many of these dilated and overworked hearts are to be restored to the normal. It is also the best treatment for the overworked nervous system. In almost all cases the dilated hearts return to normal: the quality, rhythm and rate of the pulse become normal: extreme nervousness disappears: metabolism is improved and the patients gain rapidly in weight. A gain of from 25 to 75 pounds in weight is not at all unusual and comes from improved appetite and digestion as well as improved metabolism. This improvement is not immediate or rapid in some cases. Patients should be given to understand that even after operation a prolonged rest cure of from six months to a year will be needed before they are entirely restored to health. Unless patients are willing to follow directions in this respect, I am unwilling to undertake surgery for their relief.

The results are permanently satisfactory in the vast majority of cases. In some cases it will be necessary to further reduce the size of the very active thyroid before satisfactory improvement is obtained. In other cases the symptoms recur and reduction in the size of the remaining lobe is needed after an interval of perfect health. The percentage of such recurrences is about one in one hundred in my experience up to date. I should estimate that it would not be greater than 5 per cent. in the long run. Some of my patients have been under observation for eight or ten years following operation, but the majority are only two or three years, and even less, past their operations and doubtless there will be a number of recurrences in these cases later on. Compared with results of medical treatment in a like series of desperately ill patients, I believe there can be no question as to the superior safety and permanence of cure by surgical treatment in a large number of cases of exophthalmic goiter.

GOITER.*

By E. F. Root, M. D.,
SALT LAKE CITY, UTAH.

Under the term goiter may be included all the non-inflammatory enlargements of the thyroid gland. Simple parenchymatous goiter in young girls can be dismissed with a word. It is generally an expression of the general overgrowth of the glands of the body at puberty and require only general care. Seldom does it develop a pathology requiring special treatment. Any form of malignancy in the gland must be dealt with as malignancy elsewhere. So the same care in making diagnosis should be exercised not to overlook beginning malignancy. If in doubt, extirpate and examine afterwards.

Regarding the simple form of goiter, Dock says there is a medical treatment—iodin. This may be given as such or in the form of the animal extracts, but care must be taken not to carry it to the point of thyroidism, that is, producing headaches, tachycardia, tremors, etc. Also if this fails to get a response within a reasonable time, the case is surgical.

Exophthalmic goiter is the most interesting pathologic process. Volumes have been written and many theories advanced, yet the entire process is not definitely known. The theory of Möbius is most generally accepted, that there is an increased and altered secretion—hyperthyroidism.

If we could have a clean-cut conception of all that hyperthyroidism implies, we would be able to comprehend most of the pathology of the ductless glands, including probably the pituitary body, the sympathetic and central nerve control. But we must remember the probable multiple involvement of the ductless glands in the same pathologic process. When one is affected, another is likely to be, and all together a process is set up we call hyperthyroidism. Usually the most striking feature of the symptom-complex points most strongly to the thyroid gland as the sole offender. And while an abnormal or vitiated secretion does undoubtedly produce the whole train of symptoms of exophthalmic goiter in many cases, the surgeon should not be overpositive regarding the prognosis, for other factors that can only be guessed at may have a determining influence.

The disease occurs more frequently in women than men, in the proportion of five to one, and between the ages of 15 to 40, although it may occur at any age. The disease may be acute or chronic. Acute, if lasting only a few weeks or a few months. Most of the cases are chronic, lasting over a period of several years, unless the glands can be controlled. There are a few symptoms that are fairly constant.

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*Read before the Nineteenth Annual Meeting of the Idaho State Medical Asociation, Boise, Idaho, Oct. 11-13, 1911.

Tachycardia is said to be a symptom in every case throughout or during some part of its course. Tremors, exophthalmos and loss of weight are pretty constant. Other symptoms are psychic, nervous, vasomotor, muscular, gastrointestinal, genital, etc. The anatomic changes are more or less marked. The thyroid gland enlarges, becomes more vascular. The normal colloid is decreased and an increase of proliferation of epithelium and the follicles contain more mucoid substance. The heart becomes hypertrophied and dilated, with fatty degeneration. The muscles take on fatty degeneration, and the orbital fat is increased, producing exophthalmos. The patient becomes very weak and nervous and, unless safeguarded, may die from heart failure, due to lack of compensation. Or diarrhea, vomiting, sleeplessness and mania may bring on a general weakness with edema and albuminuria that eventuates in death. The generally exhausted condition predisposes to other wasting diseases. If the disease has been severe and the patient lives, there are generally some traces remaining, such as irritable heart, neuroses, or general weakness.

Given a case of extreme nervousness with tachycardia, loss of weight, and inability to sleep sufficiently, Graves' disease should be suspected, even if there be no perceptible enlargement of the gland. It is even possible to find this condition when the gland is abnormally small. But, as has been mentioned, in atypical cases the other glands may play a part in the pathology. We are, so far, very much in the dark as to the real pathology and even the physiology of the gland. We do not know that any deviation from the normal secretion directly brings on symptoms of either hyper or hypothyroidism.

The object of all treatment, either medical or surgical, must be a correction of the quality or amount of thyroid secretion, plus the general care of the condition of the patient. So far as drugs are concerned, iodin in some form is about the only one that has any direct effect; and as this is usually present in too large an amount, the greatest care must be exercised in giving it, either as such or in the form of the animal extracts. Possibly, if the secretion be not large but vitiated, the thyroid extract or iodin may be beneficial. Thyroidectonized lymph is used, hoping to balance the amount of iodin secreted. Milk from thyroidectonized animals is used for the same purpose. Rogers is using serum of rabbits injected with extract of glands from exophthalmic patients. These, and a hundred others, are being tried out, but so far all are in the experimental stage. Absolute rest in bed, as carried out by the Vienna school, offers most for the medical care of these patients. They are weak and sick, mentally and physically. Their hearts are bad. Their muscles are flabby. Their nerves are shattered. They cannot sleep. Put them to bed. Keep them there with all care of every function.

If after a reasonable time there be no improvement, the case is surgical. Surgical treatment aims at the same result as the medical, viz: elimination of the abnormal secretion. In some cases the gland is small, and ought not to have any part of it sacrificed, so we try to control the output by cutting down the circulation. Generally, one side seems more involved than the other. The main vessels on the side most affected may be ligated, and possibly later the vessels of the opposite side. This materially reduces the circulation, and to some extent the secretion, and occasionally controls the disease without further interference. But most cases that come to operation require removal of the part of the gland most affected. This, in a large majority of cases, is the right side.

Now just a word about the operation itself. It is nonsense for the average operator to attempt operation with local anesthetic. It is always finished with general anesthesia. The patient is weak and nervous, and should be spared the fright and pain. Give atropin and morphin a half hour before beginning the anesthetic. Then the patient will be quiet, go to sleep easier, and will not have much mucus. Begin with deep anesthesia, with the patient in the horizontal position. Then raise to about 45 degrees. This produces some anemia of the brain and the parts to be cut. Very little anesthetic will be required from this time on.

Do not cut into the capsule and wound the veins until the deep part is reached, where the capsule should be left as a safeguard to the parathyroids and the recurrent laryngeal nerve. If the superior and inferior vessels are carefully ligated and the veins not wounded, then there will be little or no bleeding. This is necessary, not only to see perfectly what is being done, but especially to prevent any rough handling of the gland. If the gland be not handled with extreme care all the way through, its contents will be forced into the circulation, and we will produce an acute hyperthyroidism with probable tetany and possibly death within a few hours. Surgery does offer hope of recovery from this distressing condition in most cases, unless an extreme degree of poisoning already exists.

PRESENT STATUS OF 606 IN VIENNA CLINICS.*

By Ralph C. Matson, M. D.,
PORTLAND, ORE.

The general silence in Vienna clinics regarding the merits of 606 in the treatment of syphilis, as compared with the earlier unbounded enthusiasm everywhere present, leaves no doubt in our mind that the remedy has lost some of its earlier popularity. Whether this is justifiable or not is a mooted question that the ablest clinicians cannot decide. The great bias of some clinicians is extremely distressing and, furthermore, many men using 606 are not sufficiently well trained to make careful, scientific observations. For in no other way can it be explained why one man gives it up on account of its comparative uselessness or harm after using it in a few cases, while his colleague in perhaps the same clinic reports with great enthusiasm the wonderful effects in a thousand or more cases of all types of syphilis with less than 1-10 per cent. bad results, and these are claimed not to be due to the remedy but simply syphilitic neuritis or "neuroresidiven," as they prefer to speak of it here. It reminds one of the tuberculin controversy.

One is naturally in such controversies bound to consider the opinions of men eminent in scientific as well as clinical work. Manifestly the claims that a single injection of 606 causes an optic neuritis, when the case had previously been treated with enesol or arsacetin, is evidence of bias, for the damaging results of the latter to the optic nerve is an established fact. Ehrlich claims that salvarsan has been used in over 50,000 cases without disturbing effects and only occasionally have inflammations of the cranial nerves, particularly optic and auditory, been observed—about one case in a thousand. He has followed closely these cases and denies any relationship between them and the administration of 606, regarding them as merely a fresh syphilitic neuritis. There are, however, a great many clinicians who are not willing to admit the correctness of his views and inquiry into the subject shows the frequency of nerve manifestations to be much greater than is generally admitted. Undoubtedly many cases are not yet on record.

Whether nerve complications are more common after 606 than was observed after mercury is a question able clinicians do not agree upon. Prof. Finger, a noted syphilologist, and Prof. Alexander claim to have seen not more than a dozen cases of ear disease in six years previous to the advent of 606. They regarded acute auditory neuritis very rare. Prof. Urbanschitsch, on the contrary, has called attention to optic and auditory neuritis following the therapeutic use of soluble mercury salts. He examined the ears of 60 cases in Finger and Riehl clinics and observed five cases of suppressed function of vestibular nerve which developed shortly after 606 but rapidly disappeared. Kren examined 89 cases in Riehl clinic, treated with 606, but saw only one case with labyrinth trouble.

A few days ago I heard Prof. Finger make an address from which I made the following notes which are particularly valuable, coming from a man of his standing as a scientist and syphilographer. He stated that 606 is by no means without danger; it has a toxic effect upon nerve centers, especially the optic and auditory nerves. It has caused optic neuritis and retinobulbar paralysis. Syphilis is not so dangerous a disease that it requires so dangerous a remedy. The results obtained in 500 cases treated with 606 prove it not so effective as Ehrlich thought. It has an energetic symptomatic effect. However, just as many relapses occur after 606 as after other forms of treatment and recent experience has shown it to be of no greater value than mercury or mercury and iodides combined. It is most effective in malignant and tertiary cases and gives quicker results than mercury.

Two kinds of constitutional effects are observed after the use of 606. Early or immediate, consisting of high fever, diarrhea and headache which usually disappear within twenty-four hours in a considerable number of cases; this effect is due to endotoxin.

The second class are nerve symptoms which appear later and last for several weeks, at times even four to six. The patient complains of dizziness and vomiting, and may become completely deaf on both sides. Epileptiform attacks five or six weeks after an injection are not uncommon. From two to four attacks may occur without other symptoms. In 500 cases treated with 606, 45 had severe nerve symptoms. One case died. This case had iridocyclitis, some meningeal symptoms and deafness. The post-mortem showed a basal syphilitic meningitis, endarteritis, with thrombosis of vessels at the base of the brain.

Prof. Finger concludes that 606 symptomatically is better than mercury, symptoms disappearing after it more quickly than after mercury, but it is certainly more dangerous and should not be used in simple cases, but only in selected cases which may be grouped in three classes:

(1) Severe malignant syphilis, or severe tertiary lesions.

(2) Patients intolerant to mercury, or not reacting.

(3) For abortive treatment. In this class of

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*Received from Dr. Matson, who is at present studying in Vienna.

cases success will be obtained in about 20 per cent. if properly used. Spirochetes should be demonstrated in the chancre as the Wassermann reaction is not yet positive. The chancre is excised and two injections of 606 given, using .4 gm. for men and .3 gm. for women, repeating in ten to twelve days and continuing with mercury. The injections must be intravenous. Prof. Finger says those who cannot employ this method should not use 606 at all. In children, however, when the vein cannot be found it is permitted to inject intragluteal. Abortive treatment carried out after four or five weeks does no good; it must be used before the secondaries appear and before even the Wassermann reaction becomes positive, which then indicates a general dissemination.

While at the children's clinic of Franz Hamburger I heard him say that 606 must not be given to infants. In ten cases in which he had given the preparation nine died within a few weeks, suffering from diarrhea and cachexia. He thought death due to arsenic intoxication.

In Vienna the most popular method of giving 606 is the combined method. In the Finger as well as the Riehl clinic 606 and mercury are combined. Prof. Riehl gives .4 gm. intravenously, follows with 30 inunctions, then .4 gm. intravenously and watches the case. In both clinics, therapy is controlled by the Wassermann reaction, which by no means has lost any of its long enjoyed popularity as a diagnostic aid and control of treatment. The Nogouchi test is considered too sensitive, giving positive reactions in cases without a history or evidence of syphilis and negative to the original Wassermann reaction.

It is worthy of note that nearly all of the disturbances following 606 have been reported as occurring in the early stages of syphilis, between the second and eighth month after infection. This evidence is utilized by the supporters of 606 as proof of the syphilitic nature of these complications. In addition all cases have occurred after subcutaneous and intragluteal injections and few, if indeed any, after intravenous injections. This being the most intensive method, is a further argument of Ehrlich's supporters that these effects are luetic in nature and not due to the 606. They furthermore claim such disturbances are just as common after mercury. Prof. Finger admits the luetic nature of the cranial nerve disturbance but believes that 606 is related to it. It must be admitted that the original claims of Ehrlich regarding the action of 606 have not been realized. Luetic recurrences appear to be just as common after 606 as after mercury, although not so common after the intravenous as after the intramuscular treatment.

It is now believed that all the spirochetes cannot be killed by one injection in the great majority of cases nor is there any necessity for this. Our previous idea that the spirochete became immune is entirely contrary to some recent important experiments made by Margulics in Ehrlich's institute. Unlike atoxyl or arsacetin, 606 does not produce resistant spirochetes. Clinically it is observed that the third or fourth injections affect syphilitic lesions with the same activity as the first and remove any foundation for the belief that all the organisms must be destroyed by a single injection.

It, therefore, appears quite clear that if 606 be used cases should be carefully selected, eyes and urine examined, and small doses given intravenously combined with mercury, the treatment being controlled by the Wassermann reaction.

Vienna, Sept. 12, 1911.

MEDICAL INSPECTION OF SCHOOLS.*

By Geo. E. Hyde, M. D.,
REXBURG, IDA.

In the consideration of this subject I would like it to include the sanitary inspection of the school building and grounds, as well as the medical examination of the pupils.

Nearly 20,000,000 children in the United States are compelled by law to attend the public schools. In Idaho last year 76,000 children attended our schools. If the state can force these children into the school room, there is an implied responsibility on the part of the state that none shall suffer or deteriorate, physically nor mentally, by reason of such attendance.

The public school system of our state is a splendid institution, and the educators, from the State Superintendent down to the overworked teacher in the mixed school, form a noble army of enthusiastic workers for the benefit of the children committed to their charge. But a cry has arisen all over the civilized world that the physical growth and normal development of the child must not be sacrificed at the altar of mental education, and that the two must go hand in hand—physical as well as mental growth and development, until they shall become so coordinated as to train the child to the most useful and best citizenship.

France appears to have been the first nation to take up this important work. By the school law of 1886, medical as well as sanitary inspection was made obligatory in all French schools, public and private. Germany took up the movement in 1889. It then spread to Austria, Norway, Sweden, Switzerland and then to England. In all these countries it is now national in its scope. It is also in operation in Chili, The Argentine Republic and in Japan.

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*Read before the Nineteenth Annual Meeting of the Idaho State Medical Association, Boise, Idaho, Oct. 11-13, 1911.

Frederick J. Haskin states that "the Japanese system of medical inspection extends all over the empire and reaches the most remote rural community. Thus the Japanese department of education is able to tell how many children are in school in the empire, how many are robust, medium or weak, how many have defective eyesight, and what diseases are most prevalent at different ages of school life."

Boston and New York were the first cities to take hold of the work in our country, and the movement has grown until 43 per cent. of the schools of our cities have medical inspection.

Very little has been attempted in Idaho on these lines. The State Board of Health, in their rule V, requires that the county physician shall report, on or about Sept. 1st of each year, the sanitary condition of the public schools of the county in which he resides. These reports show that the majority of our boards of education are doing all in their power to provide the school children with suitable buildings and apparatus, but our efforts should not cease until all the children attending the public schools are provided with sanitary and comfortable environments. The sanitary inspection should show that the pupils have a clean, comfortable, properly heated and well-ventilated school building, sufficiently lighted and furnished with properly adjusted seats and desks; that pure drinking water is supplied with suitable sanitary device, also that adequate sanitary facilities and playgrounds are provided.

The importance of the proper heating and ventilation of our school rooms is generally underestimated. As cold weather approaches, there is a tendency to keep school rooms overheated. Experiments were made a short time ago in Indiana, in order to ascertain the effect of different temperatures upon school activity. The pupils were all selected from one grade, the sixth, but were not informed as to the true nature of the experiments. They were told, however that they were to undergo some mental tests. The results are as follows:

The class with the room at a temperature of 80° F. were restless, dull and incapable of continued effort. Those in the room at 75° were also dull and complained of the heat. In the room with the temperature at 70° the class was cheerful and the work excellent, but the pupils in the room of 68° were doing the best work. Class working at 65° were full of work but complained of the cold, and the class in the room at 60° were too cold for good work.

The day following these same pupils were tested for one hour on written spelling and those in the rooms at 70° showed 20 per cent. greater efficiency than the pupils working in a temperature of 80°. The next day they were all tested in rooms of the same temperature and there was only a difference of 3 per cent. between the marks of the highest and lowest pupils. It is evident from these tests that excessive heat in the school room tends to dull the activity of the child's brain.

Ventilation of the school room is of sufficient importance to require careful inspection. Boys and girls must have fresh air to enjoy living and to enable them to have the greatest vitality for their school work. The normal amount of CO_2 in the atmospheric air is three parts in 10,000. In densely populated parts of cities the amount will be a little higher. Authorities agree generally that the air of the school room should not exceed seven parts in 10,000.

The amount usually in the air of badly ventilated buildings is not so injurious to health as the ill-smelling, poisonous emanations from persons and the exhaling of bacteria from the nose and mouth, but the proportion of the carbon dioxide present is in direct ratio to the other impurities, hence the practice of ascertaining the proportion of carbon dioxide.

According to sanitarians, school rooms should be of such size as to allow 250 cubic feet of air space for each child, and the ventilation so arranged as to ensure 1800 cubic feet of pure air each hour.

Dr. Kiefer, health officer of Detroit, Mich., made a series of investigations in the matter of ventilation of school buildings, and found that in those schools that were badly ventilated and had a high percentage of carbon dioxide in the air, there was a correspondingly greater number of communicable diseases.

The inspection should also see that the children are provided with comfortable and sanitary toilet facilities. The old-fashioned privy with its pit and flies should become obsolete.

Medical inspection, in the early history of the movement, was limited to the investigation of contagious diseases, and was more or less spasmodic, and generally when requested by boards of health as a means of protecting the public from epidemics.

Of course, children, by reason of close association in schools, are liable to contract contagious diseases, and negligent parents sometimes unintentionally have sent their children to school when they have been suffering from these diseases, and thus been the cause of spreading unnecessary disease among untold numbers of other children, and too often followed by permanent diseased conditions and perhaps death. Efficient medical inspection will reduce this liability to contagious disease to a minimum, as it will enable the authorities to check them before they can spread into epidemics.

Cases that are discovered by inspection among the school children will very often be the means of uncovering concealed cases at the homes. In fact, inspection in Chicago has produced this result. For every case of contagious disease discovered in their schools, the authorities have found an average of three cases at the home that were not reported.

The health reports of many cities show that medical inspection of schools is resulting in a decrease in the amount of contagion among children. In Chicago, diphtheria decreased 20 per cent. the year following its adoption, and there were 2,325 cases less of scarlet fever, with a decrease of 307 deaths from the same disease as compared with the year before inspection. Dr. Gulick states that in Boston, before medical inspection was introduced, diphtheria was more common during the school term than during vacation, but after inspection it became less common.

We are spending $500,000,000 in the United States annually for public school purposes, and Idaho last year spent $2,575,506.10 for her public school system. It has been carefully estimated that 20 per cent. of the amount paid for the education children receive in the public schools is spent to enable backward pupils to repeat grades. Idaho is, therefore, probably spending over $500,000 yearly for this same condition. A great number of these backward children are rendered so because of removable defects.

We learn, from medical inspection both in America and in Europe, that 30 per cent. of the children in the higher grades are suffering from varying degrees of myopia. Many cannot see what the teacher writes upon the blackboard and are unable to read the lessons in the book unless they bring the printed page close to the eye, and then they only have one or two letters in line of their vision. These conditions produce untold distress through eye strain and headaches. Everything is blurred and on the playground the child is clumsy and awkward and becomes a fun-bob for his playmates. Most of the defective eyesight found among children can be corrected, and a new world opened up to them, when they become as bright and ambitious as their fellows.

We have a great number of children who are forced to breathe through their mouths because of obstructions in the natural air passages by reason of adenoids and enlarged tonsils. There is then required a greater effort to breathe and the blood does not obtain sufficient oxygenation. Unless the brain is supplied with a good circulation, it has poor perception, is quickly exhausted and the intelligence becomes below normal. Finally the child becomes dull and appears stupid and listless.

We have all seen these stupid appearing children with open mouths, contracted nostrils and irregular teeth, who snore at night and frighten their anxious mother by their night terrors caused by obstruction to normal respiration and a circulation of poor blood in the brain. If these diseased conditions are removed, the child's features will tend to assume their normal appearance and where there was a dull, stupid, gaping expression, there will be shown brightness and intelligence.

Over 90 per cent. of our school children have decayed and irregular teeth. In addition to being one of the greatest assets to good looks, good teeth are necessary for proper mastication and digestion. Physicians know that the greater portion of their incomes is derived from patients with disorders of the digestive organs, and if the public would more carefully masticate their food, we physicians would probably have to become more economical in our expenditures because of decreased revenues. Another great evil of decayed teeth is that the cavities form excellent incubators for the growth of disease germs.

Being interested in this subject of medical inspection and as I am associated with the public schools of my home town by reason of membership on the school board, I obtained the permission of my fellow trustees to examine the children to see if the findings of inspection in other parts of the country could be borne out by my personal observation.

I made ruled forms for the teachers to fill out which would then enumerate those children who had: (1) faulty position at desk, (2) mouth breathers, (3) those apparently deaf, (4) those with skin diseases, (5) those with nervous twitchings, (6) those that were inattentive, (7) those desiring to go out often, (8) the condition of mentality, good, fair or poor.

After getting this information, I then had individual examination blanks printed. Two teachers registered the pupil, giving the name, age, grade, number of years attending school, as well as the history of contagious disease. The child's weight and height were recorded and the child was sent to two teachers in another room, where the distant vision was tested with Snellen's vision chart. The child was then sent to the next room with his examination paper to two other teachers whom I had previously tested on the 24-foot whisper test. From there the pupil was sent to me in the school office, where the ears, nose, throat and teeth were examined.

The results are as follows: deafness, 16 cases, 4 per cent.; adenoids, 8 cases, 2 per cent.; hypertrophied tonsils, 54 cases, 14 per cent.

There were 58 pupils with mild defects of the eye, ranging from 20/30 to 20/40, and 41 cases, 11 per cent., with 20/50 to 6/200. Thirty-one of these pupils had headaches on reading. Twelve cases had change of posture at desk in order to be able to write their lessons. Eleven could not see the lessons written on the blackboard from where they sat in their room.

The examination of the teeth showed that 55 per cent. had defective teeth, 29 per cent. of same in very bad condition. Five pupils had mitral regurgitation, with histories of rheumatism in four. Twenty-eight per cent. had no discoverable defects.

These results are very gratifying and show that the children in this western country have not nearly the same number of physical defects among them as examination shows exists among the schools of the east.

The histories of contagious diseases are of interest. Fifty-five per cent. gave history of measles; 8 per cent. of diphtheria; 68½ per cent. of scarlet fever; 45 per cent. of whooping cough; 4 per cent. of typhoid fever; 13 per cent. of smallpox, and 16 per cent. of chickenpox, thus averaging three preventable contagious diseases to every two children. I think these percentages could safely be increased 10 per cent. because the smaller children could not be relied upon to give accurate information.

I was particularly anxious to test the ability of teachers to assist in examination of children under their care and, judging from this recent experience, I believe they can be so instructed as to be competent to do most of the work.

The study of children having physical defects shows a great number who are unable to take advantage of the education the public school system provides. We know that most of these retarding defects can be removed and children's lives brightened and made more useful; therefore, is it a square deal for the people to allow children to remain so handicapped and their lives blighted?

In this day of conservation, when we are striving to protect the forest, the coal mine and the hog, and the so-called scientific management is aiming to grind out of the workingman the greatest possible efficiency at the smallest cost to the employer, it should not be out of place to give a thought to children and see if we are scientifically managing them so that every impediment to their physical growth and mental progress may be removed, so that the greatest possible number will attain the highest type of American citizenship which, in the end, will prove to be the truest economy and the greatest conservation.

DISCUSSION.

Dr. J. M. Taylor said that, to bring about medical inspection it would first be necessary to educate the people, and to accomplish this thorough and easily understood demonstrations must be made to the public by the health authorities. The suggestions made by Dr. Hyde are very good as showing the necessity for inspection. An excellent argument, and one that will appeal to the parents, is to show them how the cost of educating their children can be decreased by the discovery and removal of physical defects and improving their sanitary environments.

The president, in speaking on the subject of school inspection, said we must give up the notion that we can live as individuals. This is a social question and our laws must be so worded that faulty sanitary and hygienic conditions will not be allowed to exist. We must all give our infuence to the end that these conditions may become nearer perfect.

Dr. L. P. McCalla thought it would be well to ask some of the men from other states to give us the methods used in other places in handling this question. Our methods should be more or less uniform and we as physicians should all work together for the common good of the people. He complimented the city of Boise on its excellent superintendent of schools, and also praised the work of the school nurse.

Dr. E. F. Root said that in Salt Lake City the school board employed a school doctor who visited all of the schools, examined the school children and recommended the necessary treatment. This report is made to the teacher who reports to the parents and advises that they have necessary treatment or correction made. He emphasised importance of examining for and removing defects of nose, throat, ears, eyes and teeth.

Dr. August C. Behle, of Salt Lake, said we were all agreed that medical inspection of schools is necessary; the question is, how can it be best brought about? The teacher ought to be, and usually is, qualified to detect when anything of importance is wrong, and when something is wrong it should be corrected. Our children should not be made to suffer by the sickness of someone else. In foreign countries they have these laws and this probably explains the better health conditions existing in the schools of those countries. In his opinion medical inspection should be under the control of the Board of Health and health officers should have more authority.

Dr. J. N. McCormack suggested that a copy of this valuable paper be sent to every newspaper, teacher and physician in the state that it may be given the widest possible dissemination among the people, and that the matter be laid before the members of the next legislature. In other words, make this paper a part of the general education of the people.

Dr. G. W. States agreed that the first great thing for us to accomplish is the education of the people to see the necessity of medical inspection, but his experience taught him that this would be no easy thing to do. There are many religious and other prejudices to overcome.

On motion of Dr. McCalla, seconded by Dr. Tukey, the secretary was instructed to co-operate with Dr. Hyde and endeavor to place a copy of this paper with each newspaper, teacher and physician in the state, and the committee on legislation was instructed to work for the passage of a law providing for medical inspection of schools.

THE HEMORRHAGIC MENOPAUSE UTERUS.*

By T. C. Witherspoon, M. D.,
BUTTE, MONT.

When invited by your society to read a paper at this meeting, I handed in the title "The Menopause Uterus." With your indulgence I have changed it to "The Hemorrhagic Menopause Uterus." It was not originally my purpose to present a paper covering the whole subject, but to call attention to that type of disturbance at the climacteric which, without the usual pathologic factors that superinduce hemorrhage, is characterized by profuse metrorrhagia, frequently with serious results.

My attention has been especially directed to this subject by the fact that only recently several such cases have come to me for relief, and as the subject is one of general interest, I believe it will be appropriate at a meeting where both internist and surgeon are gathered in common. This interest is accentuated by the fact that at the climacteric the female generative organs, ceasing to functionate actively, participate in a marked atrophic process that may cause the uterus at the time to become the seat of pathologic conditions which likewise produce a metrorrhagia and which are of vital importance, demanding recognition and appropriate treatment.

Under the title "Hemorrhagic Menopause Uterus" I shall not discuss such distinctly recognized local pathologic conditions as malignant degenerations, fibroids, chorio-epitheliomas, inversions, adnexal tumors, polypi, etc., nor those general conditions to which hemorrhage is at times attributed, such as hemophila, scurvy, purpura, nephritis, infectious diseases, alcoholism, syphilis or metalic poisoning; but only that distinct lesion characterized by atrophy of the endometrium with hypertrophy of the musculosa, associated with rather profuse, prolonged and irregular hemorrhages.

In glancing over such literature as I have at my disposal, I find no uniform recognition of this trouble as a pathologic entity. Some speak of it as a local arteriosclerosis, others as an atrophic endometritis producing a hemorrhage through loss of support to the vessels, and still others consider the hemorrhage purely the result of a chronic endometritis. By the laboratory reports of several uteri, which it was thought well to remove to stop the excessive hemorrhage, it will be shown that the lesion is well defined and the hemorrhage is due not to any pathologic change but to an irregular physiology, an atrophy of the endometrium much in advance of a like change in the muscular structure of the uterus.

The number of women who suffer more or less free flowing, at intervals often irregular, is large at the time of the menopause. It is distinctly difficult to estimate the approximate percentage of all those passing through this period who are thus afflicted, for only a certain number, who decidedly dread the consequence of the hemorrhages or who suffer from other symptoms of diseases incident to this time, ever consult the physician. It is safe to say, however, that from 30 per cent. to 60 per cent. of all who suffer from climacteric disturbances sufficient to demand attention go to the physician because of hemorrhage.

It will be recalled that somewhere between the fortieth and fiftieth year the entire sexual apparatus of women undergoes an atrophy, associated with loss of the child-bearing functions. The apparent reason for this seems to reside in the disappearance of the Graafian folicles from the ovary. During the active period of the sexual life, something more or less than 50,000 of these bodies will have matured and been discharged by the ovaries, leaving the organ barren of them and atrophic at the time of the menopause. As the ovaries cease their function, the other portions of the sexual apparatus begin to atrophy and show a like loss of function; the tubes, uterus, vagina and vulvae in the order given. The order in which atrophy follows in the special tissues is usually first the mucous layers, then the muscular, though at no time should the discrepancy of the process in the two tissues be great. The mucous layer should never be completely atrophic before the muscular layer shows a similar, well defined shrinking in volume. To repeat, the process in each should proceed hand in hand, only showing the greater advancement in the mucous layer.

As the atrophy of the endometrium associated with a like shrinkage of the muscular layer becomes well marked, the loss of blood through the endometrium should progressively cease, both as to the amount of discharge and the number of flow periods. When a woman in the forties seeks the aid of the physician complaining of excessive loss of blood, it is evident that some process is afoot in her generative organs which deserves attention. Either there exists a pathology, such as cancer, fibroid growth, hyperplastic endometrium the result of prolonged congestion, subinvolution or inflammation; or an abnormal physiology such as I here call attention to.

Those suffering from hemorrhage somewhat profuse and prolonged, not seemingly dependent upon any mechanical irritation and unassociated with any physical findings such as should essentially be present in the various pathologic changes enumerated before, can usually be classed with the abnormal physiology type with which especially this paper deals.

It is said that hemorrhage plays no part in the role of the menopause and in a way I shall have to agree, but my study of these cases convinces me that in a certain, even large percentage of women, there is an associated free and irregular discharge of blood of which the physician never hears, for but the few, who suffer severely or who fear cancer, ever come to his notice. It is unfortunate that such is the case for it has to do largely with the popular notion among women that the hemorrhagic flows are to be expected and many a malignant degeneration is allowed to progress to a point of extremely doubtful or impossible cure, while the sufferer rests securely content with believing it to be normal.

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*Read before the Twenty-second Annual Meeting of the Washington State Medical Association, Spokane, Wash., Sept. 5-7, 1911.

During the last few years there has been sounded a public alarm warning women with these hemorrhages that there is always danger of cancer. The medical organizations as a whole have taken the matter up seriously and undoubtedly much good has resulted from this effort. But, on the other hand, as long as women recognize the fact that hemorrhage may often occur at the climacteric which eventuates harmlessly, they are going in many instances to shut their eyes to all real danger and chance that all is well. Of course the number is small in whom hemorrhage is severe, even to producing decided secondary anemia; the depleted physical state of the sufferer often drives her to the doctor for aid.

The cause of the hemorrhage seems to be the contractile efforts of an hypertrophied muscular layer upon a weak and nonsupportive mucous layer expressing blood from the capillary vessels contained in it. Possibly the large amount of interstitial tissue found between the muscular bundles helps to produce a mucous congestion by damming back the venous return of blood. This leads to easily superinduced capillary rupture. The one class of cases confounded with this particular lesion and apt to be mistaken for it is the one due to old congestion, associated with hypertrophy of both muscular and mucous layers with a large increase of vascularity of the mucosa. In these the diluted capillaries are found in numbers lying even just under the epithelium of the mucosa. There is always associated a well developed prolapse or other easily recognized condition, producing the congestion. In the type with which this paper deals, there is no prolapse or other recognizable condition predisposing to hemorrhage and the fear is usually entertained of malignant degeneration. In both classes the initiating factor in the production of hemorrhage is, however, the contraction of the muscle wall upon the mucous lining of the organ causing a mechanical rupturing of capillaries with consequent hemorrhage.

In those of lesser severity, nothing seems to be necessary in the way of treatment when once the diagnosis is satisfactorily established. In the severer types, however, packing, curettage, steam cautery or removal of the uterus will be necessary. I do not recommend so radical a procedure as hysterectomy as a usual remedy, rather let me say but few may need it. In the severest ones, when other means fail, it seems to be the last resort.

Case 1. Mrs. D. J. C. Age, 51 years. No detailed history of importance. General conditions, large hemorrhages from uterus. Panhysterectomy done by Dr. Witherspoon.

Pathologic findings:

Macroscopic. Uterus enlarged and very hard; when opened, cavity is found to be somewhat enlarged. The walls are much thickened, being from two to four cm. in thickness. The uterine tissue is very hard and glistening, white in color. The endometrium is thin and the lining epithelium smooth.

Microscopic. Section through centre of anterior wall of body of uterus. Endometrium. The endometrium is about one-half the normal thickness. The glands are atrophic, separated by wide areas of interstitial connective tissue. The surface epithelium is in places intact, in other places it is lacking. It has probably been pushed off by the outflow of blood. The interstitial tissue is noninflammatory. It has, however, slightly more than the normal number of capillaries.

Myometrium. The myometrium is thicker than normal. The thickness is due largely to an increase of white fibrous connective tissue between the bundles of smooth muscle fibers. Around some of the blood-vessels are a few small round cell infiltrations. There is no other evidence of inflammation. The blood vessels of the myometrium are slightly increased in size.

Case 2. Mrs. J. E. M. Age, 49 years. Obtained no detailed history. General condition, large hemorrhages from uterus. Panhysterectomy done by Dr. Witherspoon.

Pathologic findings:

Macroscopic. Uterus is large and hard. Sectioned, it shows an enlarged cavity and walls from 2½ to 4½ cm. thick. The cut surface is a glistening white.

Microscopic. Section through the centre of the anterior wall of the body of the uterus. The structure in practically every detail is identical with that found in Case 1.

In contrast, general hypertrophy; or better hyperplasia.

Case 3. Mrs. E. M. Age, 54 years. Family history. Patient's father had died of typhoid fever, mother of cancer of the breast.

Personal history. Patient had usual diseases of childhood, also diphtheria and pneumonia. Began to menstruate at 16. Always regular until the last 18 months. Has had three children. At her first confinement was badly torn (both cervix and perineum). Since then the uterus has been low and patient has worn a support. Even with prolapse, periods were always regular and painless until 18 months ago. At that time she began to have severe uterine hemorrhages; thought they were due to climacteric. She comes to the hospital because of the persistent hemorrhage.

Examination. Thorax negative. Abdomen negative. Pelvis-uterus low, large and heavy.

Operated upon by Dr. Witherspoon. Body of uterus and tubes removed; cervix fixed to anterior wall; left ovary removed.

Pathologic findings. Left ovary contained a very large cystic corpus luteum.

Macroscopic. Uterus enlarged and hard. Sectioned, the walls are thick, from 1½ to 4 cm. The uterine cavity is enlarged and projecting into it from the fundus are several sessile-like polyps from the mucosa. The cut section of the wall shows a mucosa about ¾ cm. in thickness, a muscularis much thickened, hard and white.

Microscopic. Section taken through the center of the anterior wall of the body of the uterus.

Endometrium. There is a general hypertrophy of the endometrium. It ranges from ¾ cm. thick at the point where section is taken to 2 cm. thick in region of the fundus. The surface epithelium is in all but a few places intact. Where it is absent it has probably been pushed aside by the outflow of blood. The uterine glands are extremely long; in fact the hypertrophy of the endometrium seems to be largely due to a great increase in the length of the uterine glands. The cells lining the glands are large and clear. The lumina of the glands are normal in diameter. The glands are separated by the usual interstitial connective tissue. Near the musculosa it is the usual richly cellular type of tissue normally found in the uterus.

Myometrium. The myometrium is considerably thicker than normal, due apparently to a general increase in muscle rather than of connective tissue. There is little evidence of inflammation of the myometrium. The bloodvessels are about normal in size and have little round-cell infiltration about them.

Hypertrophy with inflamed mucosa.

Case 4. Mrs. W. B. Age, 49 years. Obtained no detailed history. General condition, prolapse of uterus with hemorrhage. Operated upon by Dr. Witherspoon.

Pathologic findings.

Macroscopic. Uterus large and heavy. Not so hard as in Cases 1 and 2. On section both endometrium and myometrium are seen to be thicker than normal. Inner surface of uterus is smooth.

Microscopic. Section through center of anterior wall of body of uterus.

Endometrium. The endometrium is thickened but not to the marked extent seen in Case 3. No surface epithelium is to be seen. The uterine glands are somewhat hypertrophed. Between them is a rather large amount of interstitial connective tissue markedly inflammatory. There are not the very numerous capillaries just beneath the surface that were found in Case 3.

Myometrium. Practically identical with that seen in Case 3.

SARCOMA WITH SPECIAL REFERENCE TO ITS TREATMENT BY THE MIXED TOXINS.*

By C. J. Smith, M. D.,
PENDLETON, ORE.

Second probably to the interest the public has taken in the cure of disease comes the cure of malignant growth. I think it is practically conceded by almost everybody, that in this day and age the chief interest, if centered in any one disease, is in tuberculosis and, while the physicians in times past with the means at their command have studied tuberculosis as diligently and as earnestly as those of the present, they have not had behind them the united and untiring effort in the way of support by the laity that they have at the present time. Intelligent laymen are contributing their knowledge and their treasury to the relief of the great white plague and quite commendable indeed is it on their part, as well as encouraging to the medical profession to think that this interest is being taken.

Statisticians report that in thirty years the deaths from cancer alone have doubled and, while the exact etiology and method of attack and growth as well is not thoroughly understood, yet if this can be fully demonstrated it will be seen that the laity will take the same intelligent, earnest and painstaking interest in the prevention and eradication of malignant growth that they have in tuberculosis.

As intimated above, malignant growth seems to be on the rapid increase and, if we are to believe statistics in the research along this line, it seems to be a disease somewhat selective in civilization, although the Japanese have reported a species of malignant growth found in fish. The celebrated Woods Hutchinson, of medico-literary fame, told me that at one time he remained two years in the London Zoological Gardens making postmortems on the lower animals to determine whether or not cancerous growths were a factor in the cause of death in the lower forms of life. After making postmortem examinations extending into the hundreds and thousands, within two years he found but three cases.

Many of us have had experience in the treatment of the North American Indian. Although having seen hundreds of cases of tuberculosis and various other diseases from which the human family suffer, personally I have never seen but one case of cancer in the Indian. Therefore, it is my belief that, either through the higher planes of civilization including the method of living or methods of contact and contamination, malignancy is encouraged in its growth and development rather than discouraged.

Roughly dividing the subject of the malignant growth into two classes, that of sarcoma and carcinoma, one being the growth of mesoblastic origin and without any cell wall and the other being the growth of the higher order of well developed cells, these two divisions each having their various subdivisions. I wish to discuss for a time the treatment of the former class, namely sarcoma.

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*Read before the Tenth Annual Meeting of the Eastern Oregon District Medical Society, Pendleton, Ore., Sept. 13-14, 1911.

When you undertake to classify liars, one of the classes has been given the title of "statistician" and consequently I am not going to attempt to go into statistics, because you can find statistics for almost any and everything. You will remember in your practice that there are a great many more cases of carcinoma than sarcoma but, on the other hand, we are particularly fortunate in our malignant growths being carcinoma, owing to the fact that sarcoma yields so little to medicine and is even pugnacious and resents surgical interference as does the viper.

In other words, the more you interfere with sarcoma, the greater the fury with which it takes on growth and action, this being a fact unless your sarcoma is in an extremity and away from the vital centers. If you have sarcoma of the hand, high amputation will sometimes save your patient. If you have it of the foot, amputation of the thigh will sometimes effect a complete cure, but it is not only apt to return in the stump but there is a tendency to metastasis and tendency to recur elsewhere in the body. Consequently we must look to other resources than surgery for the relief of these dangerous malignant growths.

It has been left to Dr. W. B. Coley, now clinical surgeon in the Medical Department of Cornell University, to demonstrate to the world in his quiet and unassuming way the value of certain toxic agents in the destruction of these growths. Accidentally in the late 80's or early 90's he observed that, when a patient suffering from malignant growth contracted erysipelas, marvelous recoveries were the result. This led up to some experiments on his part by the inoculation of certain of these malignant growths with the streptococcus of erysipelas. This he found to be quite dangerous because in a few instances the patient died as the result of the inoculation; yet the result as a whole was very encouraging because in most instances the growth was very much diminished in size, changed in color and often entirely disappeared.

After some time he conceived the idea of cultivating in bouillon the streptococcus of erysipelas and thereby modifying its virulency. At the suggestion of some of his coworkers, especially Dr. Martha Tracy, of Germantown, Pa., they succeeded combining the streptococcus of erysipelas, after first cultivating in bouillon with a bouillon culture of the bacillus prodigiosus. It seemed to offer a very great relief so far as the toxicity of both agents were concerned and at the same time apparently showed the same marked effect on sarcomatous growth.

I have recently had some personal experience with a case taken from this city, the local physicians knowing something of its history, wherein a man suffering from inoperable sarcoma of the throat and posterior nares was taken by me in person to New York and placed under the care of Dr. Coley, who examined him and pronounced it sarcoma and stating that, in his opinion, twenty-five per cent. of that type were rapidly cured by means of mixed toxins of streptococcus of erysipelas and bacillus prodigiosus.

The patient was placed under treatment by commencing 1/4 m. and increasing 1/4 m. each day until, by rise of temperature, it was seen that the toxin was taking effect. After the third treatment the patient began to show marked signs of improvement by increasing in strength, diminishing of the redness of the growth and diminution in size. Prior to treatment nasal breathing was impossible, but after the third or fourth day the patient began to breathe through his nose, being relieved more and more each day. Dr. Coley stated that at the end of six months he felt this growth would be entirely cured. Before I left the dose had been increased to 8 m. and the patient was rapidly gaining in strength and weight.

This case had been examined by four nose and throat men in Portland, all of whom are prominent men and who told the patient they could do nothing for him. Professor Stone, of New York, examined the growth in my presence and gave as his opinion that the attachment was to the posterior tip of the left turbinated, to the wing of the sphenoid and possibly the petrous portion of the temporal bone on the left side, together with the softer tissue involving the soft palate.

Professor Ewing, of Cornell University, examined a section of the growth and, while its classification was not easy, said that in his opinion it was a case of lympho-sarcoma.

While the statements of Dr. Coley would indicate that only about twenty-five per cent. of the so-called inoperable sarcoma yield to treatment, yet his experience would indicate that, after the operable type are better treated for a time if operative, by means of mixed toxins recurrences are less liable. You may ask why, if the mixed toxins work such marvels on some of these growths, are they a failure in others. I can give no better answer than quote the language of Dr. Coley himself.

"What is the explanation for these variable results? Why should the toxins behave so differently in these cases, causing some of the very worst and most hopeless ones to become permanently cured, and in others showing little or no effect. The explanation is, I think, not so very difficult. My own belief, expressed sixteen years ago, and held more firmly with increasing clinical experience, is that all varieties of malignant tumors are of extrinsic or microbic origin. Just what type of organism this may be—whether bacterium, protozoan, spirochete or what not—is of little consequence. Assuming such origin, we have but to follow the analogy of other diseases of known germ origin. We know that in all such diseases there is a natural immunity and an acquired immunity. In the case of malignant tumors there is probably a natural immunity which is very great, but in certain cases it is absent or becomes lowered, and the germ finds a favorable site and here starts the primary malignant tumor.

The important role that trauma or injury plays in the development of malignant tumors, now accepted by all authorities, can to my mind but be explained on the theory of microbic origin, some writers, e. g., Tillmanns, going so far as to state that most cases of bone tuberculosis follow an antecedent injury, the bacilli, of course, being present in the circulation prior to the injury; but a naturally existing immunity of resisting power of the tissues has been sufficient, up to this time, to prevent any local infection. The injury, lowering this local resistance of the tissues, furnishes precisely the conditions favorable for the growth and development of the bacilli. Hence the origin of the tuberculous lesion.

The reason why a cure results in some cases is that in these the antagonistic action of the toxins is sufficient to destroy the cancer cell and render the soil unfavorable for further growth; whereas, in other cases the tumor cells, by reason of greater vigor or better nourishment, are more resistant and, although receiving a temporary setback by reason of the changes in the blood produced by the toxins, soon accommodate themselves to the new environment and continue to grow as before.

The high temperature produced by the toxins may also be a factor in causing the improvement that follows their use. Many and repeated blood examinations of sarcoma patients treated with the toxins show almost universally a marked leucocytosis as a result of the treatment.

That the tumor-cell is ever in a delicately balanced state is shown by the experimental investigations upon mouse-cancer during the past four years. A certain strain of carcinoma was found to grow well in Berlin mice, but would not grow at all or in few cases only in Danish mice of the same breed. To quote a recent and unpublished paper of Dr. Jones Ewing, "Apparent slight differences in the food supply sufficed to render the soil unfavorable to the tumor-cell. These remarkably delicate nutritional requirements of the cancer-cell suggest that some means may be found to render the human patient's tissue unfavorable for cancer growth. And this is exactly what, in my opinion, the toxins do in sarcoma."

CONCLUSIONS.

1. Malignant growth is on the increase among civilized nations.
2. The laity must be encouraged in its prevention and cure as they have been in tuberculosis before great results will obtain.
3. All cases of operable sarcoma are not necessarily hopeless.
4. Coley's mixed toxins offer the greatest relief so far in the cure of sarcoma.
5. The medical profession, if sufficiently diligent, will soon find a remedy for practically all malignant growths.

NITROUS OXIDE OXYGEN ANESTHESIA.*

By S. W. SCHAEFER, B. A., M. D.,
PORTLAND, ORE.

Along with the general improvement in surgical technic in recent years, a closer study of anesthetics has also been made with the object of reducing their dangers. A more careful administration of the older anesthetics has been almost universally inaugurated and new methods of giving them have been devised, while at the same time many new anesthetics have been introduced. Of these newer nitrous oxide combined with oxygen seems to have given the best results and is being most widely used.

Strictly speaking, it is hardly proper to call nitrous oxide a new anesthetic, for its anesthetic action was discovered half a century before that of ether or chloroform; and over forty years ago Andrews, of Chicago, used a mixture of nitrous oxide and oxygen. However, it is only in the past few years that it has come into use as a general anesthetic, and in major surgical work is definitely a new anesthetic.

Paul Bert, in 1878, demonstrated that nitrous oxide had definite anesthetizing properties and that if, while enough nitrous oxide was given to induce complete anesthesia, a sufficient amount of oxygen could also be introduced into the blood to prevent asphyxia, the narcosis could be continued with safety for an indefinite time. With these objects in view, many different kinds of apparatus have been devised, but only during the past few years have satisfactory ones for general anesthesia been introduced. Of these I have used the Gatch apparatus which seems to me to have several advantages over the others. A brief description of this apparatus and the method of administration of the gases will make more clear the advantage of this method of anesthetization.

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*Read before Spokane County Medical Society, Spokane, Wash., March 16, 1911.

The Apparatus. This consists of a metal holder in which are placed three tanks of gas—two of nitrous oxide and one of oxygen. To one side of the holder a rubber bag of eight liter capacity is attached, which is connected with each of the gas tanks by small rubber tubes; the bag is also connected with a large rubber tube, one inch in diameter, which leads to the face piece. The face piece consists of a valve box and a mask made of metal. Over the mask part of the face piece a rubber cuff is fitted which can be accurately and snugly adjusted to any face. The valve box of the face piece is the most important part of the apparatus. It consists of an outer and inner tube which work on each other like a trombone. By sliding the inner tube to a given one of three positions certain valves are brought into play, and the patient may be made to breathe air in and out, or gas in from the bag and out in the air, or gas to and fro into the bag. There is also an attachment by means of which ether can be given along with the gases or separately. The great advantage of this apparatus is its simplicity, requiring so little attention in its operation that the anesthetist can devote his time to watching the patient.

Method of Administering. The face piece is put on with the air vent open, so that the patient simply breathes air in and out; the cuff is snugly fitted to the face, as any air interferes with the smoothness of the anesthetic. The rubber bag is filled with nitrous oxide from the tanks as the inner tube is moved, so the patient breathes gas in from the bag and out into the air. This is continued for several minutes, until the patient has, as it were, "washed out" all the air from his lungs. The inner tube is then again moved forward so that the patient now breathes gas back and forth into the bag. At the same time a whiff of oxygen is admitted to the bag, just enough oxygen being let in to remove all cyanosis. After the patient has breathed to and fro into the bag for about two minutes, the valve box is again moved, so he can empty the bag by breathing out into the air. The bag is then again filled with a fresh mixture of gases which the patient again rebreathes; and this process of rebreathing the gases for about two-minute intervals is continued as long as the anesthetization is desired. The amount of oxygen to be given is judged by the patient's color.

The question, of course, comes up as to the danger of rebreathing, as much has been written of the dangers of organic poisons in the expired air. However, according to the leading physiologists, it is most unlikely that any volatile organic poisons occur in the breath, water vapor and carbon dioxide being the only harmful products of respiration; and carbon dioxide has no ill effect until it has reached an accumulation of four per cent. A normal adult can breathe the contents of an eight liter bag sixteen times before the carbon dioxide will reach four per cent, and practically, much longer without evil effects.

As a matter of fact, it has been found that rebreathing has a markedly beneficial effect on the patient. Without rebreathing, his respiration soon becomes shallow and his pulse more rapid, even when his color is good and the anesthesia satisfactory. Rebreathing, on the other hand, causes the respiration to become deeper and fuller and the pulse, usually, slower. These facts can be very easily explained by the work of Dr. Yandall Henderson on shock, which indicates that carbon dioxide has a direct action on the nervous system.

"Failure of the circulation in shock," Dr. Henderson states, "is due primarily to abolition of venous, not arterial tonus. The hypothesis is presented that acapnia (diminished carbon dioxide in the blood and tissues resulting from hyperpnea and from exhalation of carbon dioxide from exposed viscera) is the cause of surgical shock." He maintains that carbon dioxide is the normal stimulant of the venous wall; that, if the amount of this gas in the blood be decreased below a certain level, the veins dilate and blood accumulates in them until not enough is returned to the heart to properly maintain circulation. He believes that shock is only indirectly the result of trauma which, occurring under anesthesia or after injury, is due to overventilation of the lungs, thus diminishing the carbon dioxide content of the blood and allowing the patient to "bleed into his own veins." He was able simply "by regulating the pulmonary ventilation" to vary the rate of the heart beat at will. He believes that carbon dioxide exerts a stimulating action, not only on the respiratory center, but also on the vasomotor and cardio-inhibitory centers; that the respiratory center is much more sensitive to the carbon dixoide than the other two, which are markedly affected only after the percentage of carbon dioxide becomes much higher than normal. Thus, as a rule, a reduction of the carbon dioxide content of the blood causes shallow, feeble respiration, a rapid pulse and low blood pressure; while excess of carbon dioxide causes deepened respiration, slowing of the pulse and increase of blood pressure.

These theories are well borne out clinically on the administration of nitrous oxide and oxygen by rebreathing, which increases the carbon dioxide content of the blood. A rapid pulse before operation practically always becomes much slower after rebreathing has continued for some time; and very sick patients with rapid pulse and shallow respiration often appear markedly benefited by this form of anesthesia. There is also nearly always a definite and continued rise of blood pressure, there often being a rise of 20 to 30 mm. Hg.

The heat of the exhaled gases has also an important action, as normally the body loses a large amount of heat in the expired air. This loss is, in great part, prevented by rebreathing, so that there is always a rise in the body temperature—about half a degree in anesthesia of thirty minutes, and a little over one degree in anesthesia of an hour's duration. The water vapor which accumulates in the expired gases has not been found to have any ill effect.

CLINICAL RESULTS AND OBSERVATIONS. I have records of some seven hundred patients anesthetized in this manner at the Johns Hopkins Hospital without a fatality due to the anesthetic.* It would be idle to maintain that there is absolutely no danger but this is practically nil in the hands of an experienced anesthetist. Likewise in the hands of skilled anesthetists there is very little immediate danger in the use of the other anesthetics. However, there may be the greatest difference in remote effects of the two and in this connection some of the recent studies of the action of anesthetics on the blood are interesting. Hamburger and Ewing have made an extended laboratory investigation into the effects of the narcosis produced by nitrous oxide, chloroform and ether on the blood. Their findings are published as a part of the preliminary report of the Anesthesia Commission of the A. M. A., and say in regard to ether:

"The color index shows a rather constant drop, starting immediately after anesthesia and reaching its lowest point on the fifth and sixth days. This would indicate a relative loss of hemaglobin per cell, and again is unlike nitrous oxide results, in which the only sign of a lower index is found immediately after the anesthetic mask is removed, and which is completely gone in two hours.

"In ether the volume index likewise shows an immediate loss, which is most marked in twenty-four hours, and again on the fifth to seventh days. In nitrous oxide readings the percentage volume remained unchanged throughout."

According to these men, an anesthesia with ether of only fifteen minutes causes a definite and demonstrable anemia; and such an effect as this, which does not begin to improve until the fifth day, must certainly retard convalescence in even the most favorable cases and in border line cases may be the determining factor.

Recent investigations have also demonstrated the part played by the blood in preventing and combating infection, and they have also shown us that there is more than a local predisposition to infection; for, after ether anesthesia, the power of the blood to destroy pathogenic bacteria is markedly reduced. As a matter of fact, the members of the entire group of alcohol, ether and chloroform reduce the power of the blood to combat bacteria. As was recently said in an editorial in the Journal, commenting on the work of Graham: "The state of a man after a long anesthesia is comparable to that of an alcoholic with bronchitis who has been sleeping off an overdose of alcohol in a doorway or a freight car."

Graham's work has shown that it is not the power which serum itself has of destroying bacteria through bacteriolysis which is reduced by ether, but that the destruction of bacteria by phagocytosis is greatly reduced. From the standpoint of surgery this is very important, for the two microorganisms that the surgeon fears most—the pneumococcus and and pus cocci—are destroyed chiefly through phagocytosis and not by bacteriolysis. Thus, ether lowers the patient's resisting power against infection, whereas nitrous oxide exerts no such injurious effect on the blood cells, and consequently does not lower the patient's natural immunity.

As a rule, this anesthetic is as satisfactory to the surgeon as to the patient. It has been used for practically every abdominal and peripheral operation. The longest administration of which I know is five hours. However, it would be claiming too much to say that this form of anesthesia is always as satisfactory to the surgeon as ether, because there are some patients who cannot be kept properly relaxed without a disagreeable degree of cyanosis. Such cases can usually be carried on satisfactorily by giving a few drops of ether—not enough to give any ether effects. However, every now and then we get a patient in whom we think it best to give straight ether.

There are practically no bad after effects after nitrous oxide. Some patients vomit just after the anesthetic, but I have seen no cases of intractable vomiting lasting over several days, as I have with ether even when skillfully given; and, if there are no other contraindications, food can usually be eaten immediately after the administration. In fact, many of my patients have complained bitterly of hunger an hour after its administration. I anesthetized one patient with a rectal stricture and ulceration two or three times a week for several months; she always wanted something to eat as soon as she got back to the ward. Another pleasant thing about this anesthetic is the ease with which it is taken; consciousness is quickly lost and quickly regained; the patient becomes fully conscious and able to talk with his family a few minutes after the mask is removed.

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*A later report by Gatele states that among 2,500 NO-O anesthesias at the J. H. Hospital there were three fatalities, all of which he attributes to other causes than the anesthetics.

The greatest indication, in my opinion, for the use of nitrous oxide as a general anesthetic is in case of pulmonary tuberculosis or any suspicion of a tuberculous lesion in the lungs. It is well known how ether chills and irritates the lungs and how often it causes a quiescent lesion to flare up or an active lesion to pass into a caseous pneumonia. Nitrous oxide has no irritating effect on the lungs, and by the method of rebreathing the temperature in the lungs is raised instead of lowered. For similar reasons, in case of bronchitis, nitrous oxide may be given with impunity, when it would be taking the greatest risk to give ether. As nitrous oxide has no irritating effect on the kidneys, it is also most useful in case of nephritis or in operations on the kidneys.

Another point that is sometimes of importance is that some people will refuse to submit to an operation if they have to take ether, but will readily do so if assured they will only be given "laughing gas." And this anesthetic is really so harmless and so easily taken, that it can be given over and over again to the same patient, e. g., in making painful dressings, manipulations, etc.

In conclusion, the advantages of nitrous oxide oxygen anesthesia may be thus summarized:

(1) Its remedial action in shock.

(2) The fact that it does not lower the natural resistance of the body.

(3) The absence of any irritating or chilling effect on the lungs, making it particularly useful in case of pulmonary tuberculosis.

(4) The pleasantness of the anesthetic; the rapid loss of consciousness and the quick regaining of it; the absence of postoperative discomfort.

A PHASE OF THE TONSIL QUESTION.*

By R. W. Perry, M. D., L. R. C. E., Edin.

SEATTLE, WASH.

The tonsil question is one that has occupied a great amount of space in recent medical literature, and great and varied has been the speculation as to its cause, function, and place in the economy. Assuming that, as it exists, it must have a function, many have been the theories built around that false assumption, and many of our recent writers have traveled far afield in an endeavor to prove a function for this specimen of superabundant pathologic tissue.

Some claim for it a digestive function, although it is easily proven to have no digestive power or ferment, nor has it ever been known to have any beneficial effect on digestion. We are told of its vocal function, yet we know that the vowel sounds are the only musical sounds and that the enlarged tonsil, acting as an obstruction, can only act to decrease their beauty and power. We are asked to believe that it has a developmental function, because it is active during the years of development, although such is a mere coincident.

It yet remains to be proven that the tonsil has one single useful function, to show that it is physiologic and not pathologic tissue. The evil action of tonsils is too well known by every observant physician to require any evidence in substantiation. The gain in weight to nearly every child following their removal is well known, as also the cessation of mysterious flashes of temperature, for which the poor stomach has always taken the blame and the decrease in size of the large glands of the neck when their main feeder is removed.

In fact, the enucleation of the tonsil is the closing of the open door. It places between the ever present germ of infection and the open lymph channels of the neck an impregnable wall of cicatricial tissue. It removes from the throat that most inviting series of culture tubes and thermostat, where so many germs are nursed and nourished in their infancy for their deadly work ahead. Little wonder, then, that so many children succumb to infection before nature by her slower methods of hypertrophy and cicatrization places her seal on the weakest spot in her defensive armour.

The tonsil is to the circulatory system what the inguinal canal is to the abdomen,—a weak spot in development. If we look at the tonsil for what it really is, simply a compound, lymphatic gland, how easily are all our questions answered.

Take the tonsil, then, as a lymphatic gland that, in the process of evolution, has become exposed in the throat, due possibly to a developmental defect. At birth it is small, provided the lymphatic system is normal. It is not till about six months after birth that, on the disappearance of the plica-tonsilaris, the gland becomes exposed, covered only by mucous membrane, and subjected to attack of irritants and germs of the food and air.

For the first eight years of life the fight goes on between nature and the irritant, resulting in the enlargement due to irritation hyperplasia, and thus the tonsil is formed which is a pathologic state of a compound lymphatic gland. At about twelve or fourteen years of age the hypertrophic tissue has been replaced by cicatricial tissue which means the disappearance of the tonsil at that period or, if the germ attacks have been more successful, the tonsil remains as a permanently diseased mass and so continues on to adult life.

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*Read before the King County Medical Society, Seattle, Wash., Nov. 7, 1910.

The number of lymph vessels connecting the tonsil and the lymphatic of the neck is just as great as between individual lymph glands themselves, and shows the incompleteness of any extirpation of the cervical lymphatics unless combined with the enucleation of the main feeder, the tonsil. Having decided that the tonsil is entirely pathologic, we exhibit towards it less charity and attack it with more courage. That fetish disappears which encourages some benighted practitioners still to cherish this ''putrefying sore'' in the belief of its sexual functions.

The description of chronic lymphadenitis of the peri-bronchial glands of coal workers, as described in our works on pathology, shows a striking analogy to the changes from lymphatic gland to tonsil. In the early stages the enlargement is due to simple cellular hypertrophy but soon the capsule and stroma become thickened, encroaching gradually on the lymphoid cells until finally there is atrophy of the lymphoid elements, and the node is converted into a fibrous nodule.

In the study of the lymphatic gland we find the key to the successful method of tonsil enucleation. The lymphatic gland lies in its capsule loose in the cellular tissue with slight attachment. So also did the tonsilar lymphatic originally. When the capsule of this gland split, it formed its only important attachment along the margins of the pillars anterior and posterior. The mucous membrane of the pharynx is reflected on the exposed lymphoid tissue, forming an attachment to the capsule of the tonsil. Drawing it out of its bed, an incision is made through the mucous membrane at the edge of the pillars, encircling the tonsil and exposing the capsule and postcapsular space. A snare is now readily insinuated into the postcapsular space, follows down the line of least resistance and the entire tonsil readily removed with a minimum of traumatism, hemorrhage and trouble, and every part of its capsule can be demonstrated.

I believe the tonsiltome, as an instrument for removing tonsils, is antiquated, unsurgical and dangerous. Antiquated, as recent study of tonsillar anatomy alone would forbid its use. Unsurgical, as the work done by it is incomplete. It does not, as is the case with the snare, follow the line of least resistance, but cuts directly through in a straight line, leaving almost always some of the tonsil crypts to continue the absorptive power of the gland. Dangerous, as most cases of fatal hemorrhage on record have followed the use of this weapon.

The danger to the muscular tissue around the tonsil is a violation of that cardinal rule of tonsil removal, viz., ''leave the pillars alone.'' They should not be separated from the tonsil but the tonsil separated from them.

DIABETES MELLITUS IN CHILDHOOD.*

By Walter Gellhorn, M. D.

SEATTLE, WASH.

Diabetes in childhood at the present time is a disease which receives the least therapeutic attention from the majority of physicians. The same man, who would gladly sacrifice hours thinking of measures of temporary relief for a patient with inoperable cancer, will dodge the treatment of a diabetic child. He will inform the parents of the hopeless therapy and will satisfy his professional conscience by advising the use of gluten bread and milk, in place of other starchy foods, and the substitution of saccharin for sugar. This paper is a plea for the better care of those unfortunate human beings. It presents no cure, but offers means of relief and improvement which may last for considerable length of time.

Diabetes in childhood does not represent a different disease from the diabetes mellitus among adults. The distinctions are expressed by the clinical course, prognosis and by the even greater importance of therapeutic details. von Noorden defines diabetes mellitus as a disease in which the organism shows diminished capability of utilizing glucose. The cause of this abnormality is the lack of forming and storing glycogen in the liver and the carbohydrate using organs, based on a functional disorder of the glands with internal secretions and certain parts of the nervous system. Also the increased formation of sugar comes in question.

The study of a disorder of the carbohydrate metabolism calls naturally for an acquaintance with this procedure in normal man. In this respect our present knowledge is briefly the following: The portal vein carries the carbohydrates to the liver from the intestines. The blood of the vein contains, according to the food, glucose, levulose. galactose and traces of maltose and dextrin, and sometimes, following an excessive supply, lactose and saccharose, which cannot be utilized by the tissues. The function of the liver is now to store the first mentioned five carbohydrates in form of glycogens and to regulate the retransformation of these glycogens into grape sugar and the transportation of the latter into the blood. But the food sugar is not the only source of glycogen formation. The liver is able to form sugar from proteins also, and it has been found that 100 gm. of proteins may yield from 45 to 65 gm.

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*Read before the Twenty-Second Annual Meeting of the Washington State Medical Association, Spokane, Wash., Sept. 5-7, 1911.

of sugar, which is deposited as glycogen, a knowledge of great therapeutic interest.

It has long been known that the protein molecule contains a carbohydrate group, but experiments have shown that this group alone does not furnish the sugar thus gained. Contrarily the milk casein, lacking such a group entirely, is a very fertile sugar former. Next to the liver, the muscles form and store a glycogen also. They gain their material from the blood sugar, i. e., they are dependent upon the glycogen transforming action of the liver.

The cells of the body, especially the muscle cells, constantly need sugar for the production of energy and heat. The demand for more fuel is signaled to the liver, which answers with sugar formation according to the need. In case of too small quantity of carbohydrates in the food, the body uses at first the glycogen stores and, if they are used up, the essential sugar is formed from proteins and fat. The glycogen storing capacity is limited. So, an excess of sugar in the food will cause a transformation of the surplus into fat or, when this excessive import is a very sudden one, we will notice the appearance of an alimentary glycosuria, finding quantities of this same sugar in the urine. The point when such an event will take place depends on the quality of the sugar and the individual tolerance.

It is of great interest to study the animal experiments in regard to the regulation of the sugar formation by the liver. Claude Bernard's famous puncture of the fourth ventricle has shown that a lesion made in a certain part of it causes a temporary glycosuria, providing the liver contains glycogen and the sympathetic nervous system is intact. But this central irritation of the sympathetic nerve does not cause the liver directly to transform all its glycogen into sugar, because the severance of all the nerves going to the liver does not prevent this symptom. The way must be an indirect one, over the chromaffin system, because the experiment fails after the extirpation of the adrenal bodies, after the severance of the left splanchnic nerve which innervates both adrenal bodies, or after the extirpation of the thyroid gland.

The hypothetic explanation of these experimental facts is the following: The puncture causes an irritation transmitted by the left splanchnic nerve to the adrenal bodies which produce an excessive amount of adrenalin, thus causing an abnormal sugar forming activity of the liver, too strong for the normal inhibiting influence of the pancreatic gland. The quantity of the blood sugar increases and the excess appears in the urine. Extirpation of the thyroid gland is able to prevent this, because absence of this gland stimulates the inhibiting action of the pancreas. Besides the ventricle puncture mechanic or toxic irritation of the sympathetic nervous system may cause the same result, adrenalin injections and certain poison, either one acting directly on the liver, are independent from the nerve in their glycosuric action, likewise poisons which paralyze the pancreas. Such observations illustrate the transitory glycosuria, not uncommon in traumatic neurosis, various injuries to the brain and certain poisonings.

The indirect participation of the thyroid gland in regulating the carbohydrate metabolism explains the not infrequent alimentary glycosuria in Graves disease and the tremendous tolerance for sugar in myxedema. (I observed once during the treatment of a myxedematous child the sudden appearance of glycosuria, polyuria, polydipsia, and polyphagia, interruption of the thyroid extract feeding causing quick recovery.) The anterior lobe of the hypophysis has an action very similar to that of the thyroid gland. In contrast to all these experiments, causing only temporary glycosuria, we know that the total extirpation of the pancreas produces a true diabetes of the severest type. This result can be prevented by successful transplantation of another pancreatic gland into the animal, provided this be performed before the removal of the original gland. The theory is, that the pancreas has an internal secretion governing the sugar metabolism, because incomplete removal of the gland or drainage of the pancreatic juice to the outside does not produce the disease. Further on the disease can be totally or almost prevented, when one removes the gland in an animal which lives in artificial union with another normal one. The glycosuria produced by phloridzin injection lies in a different direction, being caused by direct influence on the kidney cells, which become permeable for the normal blood sugar.

THEORY OF DIABETES MELLITUS IN MAN. In regard to diabetes mellitus in man, the question is still open, whether we have to deal with a disease entity or a symptom complex. Based on the manifold experimental experiences in regard to the regulation of the sugar economy, von Noorden advances the following theory: The liver receives an impetus from the intestines in regard to sugar formation, directly dependent upon the amount of carbohydrates offered in the food. The tissues of the body, constantly in need of sugar, signal to the liver their demand, which is followed by an export of sugar into the blood. This formation is regulated by the adrenal bodies (in their turn governed by the nervous system) and by the thyroid gland, which is in close relationship to the pancreas. The adrenals represent the stimulating, the thyroid gland the inhibiting factor of the pancreatic function. A disturbance affecting any part of this system may cause diabetes mellitus. In fact, these routes of regulation are not so simple as here described and great variations are possible, but they are useful as a theoretical scheme, founded on exact experiments. We do not know how often a disturbance of the nervous and chromaffin systems may cause true diabetes, but we know that they have a tremendous influence on the severity of the disease. Especially if, as in the majority of the cases, the inhibiting function of the pancreas proves to be affected. The glycosuria, the main symptom of diabetes, is consequently the result of an hyperglycemia, caused by abundant transport of sugar into the blood from the liver, whose overfunction is caused by defective regulation. A decreased demand of the tissues for sugar cannot be the cause of this hyperglycemia because experiments show that the cells do not lose their ability of using and oxydizing carbohydrates even in animals, in which the liver and pancreas have been removed.

Etiology. It is naturally of tremendous interest to learn how man acquires such a complicated disturbance of metabolism as diabetes mellitus. Unfortunately we know in this respect practically nothing. According to careful statistics, climate and food do not generally represent an etiologic factor. Their influence in regard to the developed disease, or to individuals predisposed, will be discussed later. Racial peculiarities, especially intermarriages (predisposition of the Jewish race), are not such important factors in the diabetes in childhood, likewise not the direct heredity. But we know that in about half of the cases among children, several of the same family become the victims of this disease. (That corresponds with my own experiences in Seattle, where two of the observed four cases were of this character.) It seems that the frequency of diabetes, gout or obesity among relatives plays a more important role in regard to predisposing children than direct heredity. Contrary to the predisposition of the male sex in adults, the female sex is more often attacked in childhood. I could not find any notes in the literature, in regard to the later development of diabetes in children suffering from frequent attacks of persistent vomiting with acetonemia. One of my patients had been subject to such attacks, and it is not impossible that they represented an early manifestation of a disturbance in the carbohydrate metabolism, considering the intimate influence of the carbohydrates on fat metabolism.

The importance of syphilis as an etiologic factor is an established fact. The question of how far functional or anatomic disorders of the nervous system can cause true diabetes is of great interest. The problem is still unsettled but of tremendous importance, regarding the therapy of the future. The mentioned animal experiments demonstrate the possibility of a transitory glycosuria of nervous origin. The clinic supplies us with material regarding true diabetes following trauma of the central nervous system. But we do not know whether true diabetes can be caused in this manner without a latent disposition, although chronic functional disorders may arise from it, gradually influencing the sugar forming and regulating organs. I do not know whether very fat children show the same disposition to diabetes as fat adults. The probable etiologic influence of obesity and gout in the family history has already been mentioned.

Prognosis. The disease may attack any age, beginning with infancy. The prognosis of diabetes mellitus in childhood is generally unfavorable, and the younger the child the more so. Statistics teach that diabetes, developed before the age of ten years, ends fatally after a duration of about two years; between ten and twenty years within about two to four years. But there exist some observations in the literature which show that, discovered very early, it can be cured permanently. Schmitz mentions two predisposed children, one of four and the other of fifteen years, who were subsequently observed for twenty and fifteen years respectively without further symptoms. These facts show that an early diagnosis is of greatest importance. But here lies the difficulty. Polyuria, polydipsia, polyphagia, itching, etc. are not early symptoms; they characterize the fully developed disease.

The glycosuria may exist for months without clinical symptoms. I frequently observed during the course of the disease the appearance of considerable quantities of sugar in a urine of normal quantity, continuing even over weeks without any subjective or objective symptoms. And it seems a fact that this chronic glycosuria is mostly preceded by transitory ones in longer or shorter intervals. Now, transitory glycosuria is a very common occurrence in childhood and accompanies many affections, but it should be the cause for energetic and prolonged prophylactic dietetic management, when the usual reasons for it are absent and especially in children with hereditary predisposition. We only ought to be careful in pronouncing such cases diabetes before a careful and extended observation. We have further to remember certain cases which possess a life-long intolerance for a large amount of carbohydrates, but who never develop diabetes, when they restrict their diet accordingly. The occasional occurrence of levulosuria and pentosuria is well known. They never produce clinical symptoms of diabetes, but the pentosuria may accompany the disease, as was frequently proven in one of my cases also. For the present time both occurrences, likewise the extremely rare maltosuria do not require any treatment.

(To be continued.)

NORTHWEST MEDICINE
The Journal of the State Medical Associations of Oregon, Washington, Idaho and Utah.
Devoted to the Interests of the Medical Profession of the Pacific Northwest.
Editorial Office, 719-22 Cobb Building, Seattle, Wash.
DECEMBER, 1911.

EDITORIAL

THE THERAPEUTIC VALUE OF PEROXIDES.

As our readers know, the Council on Pharmacy and Chemistry of the American Medical Association publishes, under New and Nonofficial Remedies first in the Association's Journal and later in book form, descriptions of the medicinal articles which it has examined and found to be all right. Our readers also know, that references to New and Nonofficial Remedies will quickly show whether a given proprietary, which they are asked to use, is deserving of their consideration. But we fear that few know how much valuable information is published in this way. This is particularly true of those who are not much interested in proprietary remedies but rather concern themselves with drugs of established value as, for instance, quinin sulphate, morphin sulphate, mercurous chloride (calomel), mercuric chloride, potassium iodide, sodium salicylate and the like.

As a matter of fact, New and Nonofficial Remedies contains much that is of value to the general practictioner. As an illustration, we refer to a discussion of the peroxides of various metals which appeared in the Journal (*Journal, A. M. A.,*) Oct. 7, 1911, p. 1209) and which will be incorporated in the forthcoming edition of the above book. While treatises dealing with remedies usually discuss the properties of each article without reference to any other one, the Council first discusses the entire class of peroxides and later treats of individual members of the class. In a general discussion it clearly and simply sets forth in what respect they all are alike and also in what way the different peroxides vary in their behavior. It is pointed out, for instance, that all peroxides are decomposed by water with formation of hydrogen peroxide but that the ease with which this occurs depends on the solubility of the peroxide. It is also pointed out that the oxidizing effect of hydrogen peroxide depends on the alkalinity of its solution and that therefore the peroxides which yield an alkaline solution are more active. On the other hand, it is shown that a high degree of alkalinity interferes with their therapeutic use. Then comes a general discussion of the value of these metallic peroxides, particularly as compared with the official solution of hydrogen peroxide. This is followed by a description of the several peroxides on the market, including reference to the manufacturer whose preparations were examined by the Council and found reliable. Every physician should know something of the peroxides of metals.

MEETING OF THE CLINICAL CONGRESS OF SURGEONS AT PHILADELPHIA.

To travel across the American continent and back, a distance of six thousand miles, together with the necessary expense and loss of time from practice, seems, no doubt, a large compensation for ten days clinic. But upon arriving in Philadelphia and beholding the colossal amount of clinical surgery cases, collected for many months by the master surgeons of that city's twenty hospitals, any surgeon could not but feel more than repaid. All that was necessary for a visitor to do was to choose first the line of work in which he was especially interested and next any other operations which he might care to see, completely filling his time from early morning till six at night. This was the second meeting of the Clinical Congress of Surgeons of North America. There were present about two thousand surgeons from North America and representatives from nearly every civilized country of the world. These congresses are the greatest opportunities in the history of medical conventions, where one has the privilege and the opportunity of witnessing the master surgeons working in their own operating rooms, and especially men not only trained in operating but also in teaching.

Philadelphia was well prepared to take care of such a large body of surgeons, as there are in the city twenty large hospitals with modern amphitheatres ample in accommodation to seat this body of men comfortably, which is of great advantage to the onlooker. The headquarters of the congress was in the ball-room of the Bellevue-Stratford, one of the most beautiful hotels in the world. Here about a dozen young ladies registered the guests, gave out tickets, received the mail and answered questions. At five p. m. every day the program for every hospital and every clinic was written on a black board and the next morning a printed program was issued for the day. Visitors to the congress were entertained by the Philadelphia men in splendid manner. All the hospitals had exerted themselves to collect ample material for clinic surgery and the surgeons themselves were extremely courteous in describing their work, showing their operations and answering the rapid fire of questions directed to them by the observers. All the medical societies were thrown open to the visitors and the programs were of the highest order, papers being read by the leading men in their lines of work in America. Papers were given by such men as Binnie, of Baltimore; Brewer, of New York; Richardson, of Boston; Ochsner, of Chicago; Carroll, of New York; Wm. J. and Chas. Mayo, of Rochester; Scudder, of Boston; Reynolds, of Boston; Baldy, of Philadelphia; Cushing, of Baltimore; Allen, of Philadelphia and several others. The names are mentioned to show the class of men who give to these congresses their latest works and investigations.

The University of Pennsylvania is the oldest medical college in America, founded in 1765, and is one of the leading medical teaching institutions in the world today. It is also one of the largest plants in existence and the men doing surgery there are the products of long teaching and operating experience, which only exist where such facilities are present. There are several great surgeons in the Philadelphia hospitals and several young men who are on the road to worthily follow in the footsteps of their predecessors.

The results of this visit impress one strongly with the fact that surgery in every line is making more rapid strides than ever before. It is almost impossible to keep up with the pace of every line of work so that more and more the conditions are arriving when surgery is being divided into several specialties. The greatest advances that have been made since the meeting of the congress in Chicago last year have been in neurology, genitonurinary surgery, chest surgery, upper abdominal surgery and blood vessel anastomosis. Electric fulguration, a new method of removing papilloma of the bladder and neoplasms in other parts of the body, is a coming treatment. If one were to go into detail of all lines of surgery which were witnessed, it would make this article much too long. Suffice it to say that at these congresses one gets the new things in from twelve to eighteen months before they appear in the magazines and from two to three years sooner than in the books.

A. R.

THE ERADICATION OF ROCKY MOUNTAIN SPOTTED FEVER.

This disease was first discovered as an entity and cases reported in the early nineties by physicians of Boise, Idaho, some of whom demonstrated by experiment that it was conveyed by a tick infesting certain domestic animals. In 1906, Dr. H. T. Ricketts was commissioned by the United States government to make a thorough investigation of the disease. By a series of very interesting experiments he demonstrated the course of transmission through a certain species of a tick and also reproduced the disease in some of the lower animals. The Bureau of Entomology of the United States Department of Agriculture has just issued a bulletin on the spotted fever tick, giving a complete account of its history, distribution and method of eradication. While it was first discovered in some of the valleys of Idaho and Montana, its present distribution is known to be very wide, being found in all the states from the Rocky Mountains to the Pacific Coast. It is estimated that 750 cases occur annually, with a death rate of 10 per cent. It is now definitely known that, while the tick may be found on some of the wild animals as well as smaller domestic animals, the large domestic animals are the principal hosts of the adult ticks, who are the chief conveyors of the disease. The report describes the economic aspect of the disease as well as its menace to man.

The only means of obliterating the disease is the eradication of the tick, efforts for which need practically to be confined to the period between March 1 and June 15, when the adult ticks are found on the domestic animals. This method of eradication consists of dipping the livestock in vats, containing a solution of arsenic, which has been demonstrated as the most efficient and effective method of killing the parasites. On smaller farms, where these elaborate methods might be impracticable, a method of hand treatment of the animals is described. The bulletin gives full details of the methods to be followed. It is estimated that in three years' time, if the plan be thoroughly carried out, the fever tick will be extinct and with it will be eradicated the spotted fever.

C. A. S.

THE WATER FAMINE IN SEATTLE.

The readiness with which the lives and health of the citizens of a large city may be menaced was illustrated last month, when the water supply of Seattle was suddenly entirely cut off. Owing to the heavy rains and warm winds an unprecedented flood occurred in Cedar River, the source of Seattle's water supply. A bridge carrying the two large mains across the river was washed out, carrying the pipes with it. It required seven days to replace the large five-foot main. The distribution of water in the city is such that a certain section received no water during this period from the supply in the reservoirs, including one of the hospitals whose supply was received daily from the city sprinkling carts. The reservoirs being emptied before the repairs were completed, it was necessary for a period to pump water into the mains from Lake Washington, from sources known to be contaminated by sewage. The fact of colon bacilli being distributed in the city mains is not a pleasant thing to contemplate. Fortunately, few cases of typhoid have occurred of late in Seattle, largely owing to its incomparable water supply, and typhoid bacilli have not been found in the lake water. The authorities cautioned the public to drink nothing but boiled water for a period of three weeks, at the end of which time it was expected the contaminated water would have been cleared from the 500 miles of water mains. This experience illustrates the folly of an exposed water system which can possibly be destroyed in a moment. It is now proposed to turn the water into a tunnel of about a mile in length beneath the winding river, so that such a catastrophe can never occur again. This should be a lesson to all cities on the proper conservation of their supply of water.

C. A. S.

OUR ANNUAL ROSTER OF ASSOCIATION MEMBERS.

In our January issue we shall follow our annual custom of publishing the names of all members in good standing at the end of the year, grouped in their respective county societies, of each of the state medical associations represented by this journal. The official list of names is received from the secretary of each association. In order that the members of each organization may appear in this official list they must be in good standing by virtue of their dues having been paid to their respective associations through their county societies. As this is the only list of members published each year, it is desirable that it shall be as large as possible for the benefit of each association. Therefore, we would urge upon all readers in each state, who have not yet paid their dues for the year, that they do so at once in order that their names may appear in these published lists of members. C. A. S.

MEDICAL NOTES

OREGON.

Vaccination. The State Homeopathic Medical Society of Oregon, at its last meeting adopted resolutions in favor of vaccination. Adoption was practically unanimous, there being only two dissenting votes. The newly elected president stated that this action was absolutely necessary unless the society wished to be placed in the position of being opposed to everything progressive in medical science. There has apparently been a considerable amount of discussion in Portland concerning recent cases against illegal practitioners, the anti-vaccinationists and the views of the National League of Medical Freedom. Most of the papers have given the unscientific and radical statements along these lines the scant attention which they deserve, but the Portland Journal has apparently opened its columns to statements upon these subjects without regard to facts.

Hospital at Medford. The Sacred Heart Hospital, at Medford, when completed will be one of the most up-to-date hospitals in the state. The building is of brick and fireproof material, five stories high. The floors are of hard wood or tile and there is a complete system of intercommunicating phones with light signals instead of bells. Heat is supplied by power plant located in a separate building in which the laundry is also located.

Quarantine Hospital. A modern quarantine hospital is nearly completed at Salem. It is being erected jointly by the county and city hospital authorities, and will be under the management of the city hospital. It will cost $10,000, and will be equipped to meet every requirement of such an institution.

Narrow Escape. Dr. F. E. Smith, Superintendent of the State Institution for Feeble Minded, narrowly escaped an assassin's bullet recently. While driving home in his automobile, he was ordered to stop by a highwayman, which order was followed by a bullet that passed through the doctor's glove without injury to his hand.

State Tuberculosis Sanatorium. Drs. E. A. Pierce and C. S. White, of Portland, members of the state tuberculosis commission, recently attended a meeting in Salem, where it was determined that information concerning the state institution should be given greater publicity.

Dogs for Medical Research. The Portland pound master has agreed to supply stray dogs for medical research to any of the doctors who may need them, it having been explained that there would be no mistreatment of the animals in any way.

Dr. A. M. Kinney and family, of Astoria, have left for Europe, where the doctor will continue his medical training. He will stop in London and Berlin, and before returning will visit Rome at the time of the International Congress for the Study and Prevention of Tuberculosis. During his seven or eight months' absence his father will take charge of his practice.

Dr. W. O. Spencer, of Portland, after several months' postgraduate work in New York and Chicago, will devote himself to internal medicine, with offices in the Selling building.

Dr. F. J. Ziegler, City Physician of Portland, and Miss Anne E. Midlam, of Oregon City, were married November 8.

Drs. D. E. and Susie V. Standard have located in Richland, Eagle Valley.

Dr. G. N. Steeves, of Salem, eye, ear, nose and throat specialist, has just returned from the East and abroad, where he has spent two years in postgraduate work.

Dr. G. A. Massey. of Turner, who recently submitted to an operation for appendicitis is reported to be convalescing.

Dr. G. L. Schwegler, of Indiana, has located in Salem..

WASHINGTON.

The State Industrial Insurance Commission has appointed the following examining physicians, who will work under the supervision of Dr. Mowell, of Olympia, the medical-examiner-in-chief: F. R. Watkins, of Aberdeen; M. Appleby, of Anacortes; W. W. Ballaine, of Bellingham; David Livingston, of Centralia; E. W. Stimson, of Roslyn; D. O. Kearby, of Cle Elum; H. Blair, of Elma; J. A. McIntyre, of Hoquiam; G. E. Marcy, of Montesano; J. F. Scott, of North Yakima; H. B. O'Brien, of Pasco; H. A. Wright and C. H. Thomson, of Seattle; J. F. Mills, of Sedro-Woolley; Barnhart and Newell, of Spokane; A. L. Mathieu, of South Bend; L. L. Love and J. F. Griggs, of Tacoma; F. A. Bird, of Kelso, and H. P. Keylor, of Walla Walla.

Sanitation at North Yakima. The State Board of Health at its last meeting passed strong resolutions of approval of the excellent sanitary work which has been accomplished during the past few months in North Yakima. The board commends the citizens upon their appreciation of the importance of public hygiene and urges that the present high standard be continued.

Seattle Bacteriologist. Dr. A. U. Simpson has been appointed city bacteriologist in place of J. B. Stetson. The change caused a considerable amount of discussion on account of allegations that it was made for political reasons. This, however, has been emphatically denied by the department of health, it being stated that the change was made solely to increase the efficiency of the department.

Study of Ventilation. Dr. Thomas Tetreau, of North Yakima, has recommended that the school board purchase apparatus for testing the atmosphere in the various rooms. He suggests that the study of ventilation may be carried on by the students and will be of practical value to the school board as well as being instructive to those who make the tests.

Scarlet Fever. Several cases have appeared in Ellensburg recently and the medical authorities are making all possible effort to avoid the spread of the disease. Parents have been requested to co-operate with the physicians by reporting all suspicious cases to the health officer.

Suit Against Examining Board. The case of Dr. A. W. Borland against the State Board of Medical Examiners has been temporarily suspended, it being decided that he shall take new examinations in the subjects in which he failed to pass.

Smallpox. Spokane has had a slight smallpox scare, between fifteen and twenty cases having been reported. The situation at present, however, is well in hand and no new cases have appeared for some time.

Weddings of Doctors. Dr. A. L. Mathieu, of South Bend, and Miss Beulah Akin, were married at Carlisle, Ind., October 19. They took a wedding trip to Chicago and thence by way of the Canadian Pacific to Seattle and South Bend. Dr. J. F. Munn, of Seattle, and Miss Bianca Martino, of Turin, Italy, were married November 4, and after a brief wedding journey have taken apartments at the Heustis. Dr. J. C. Baddeley and Miss Henrietta Leach, of Walla Walla, were married Saturday, November 4.

The fair for the benefit of the Sacred Heart Hospital, at Spokane, resulted in the receipt of $11,200. This is the total amount received, but the expenses were small enough so that the fair has been a great financial success.

Dr. L. R. Redner, of Dayton, has moved to Colfax, where he will be associated with Dr. Stuht. The latter has moved to Spokane, but will keep in touch with Dr. Redner in Colfax. Dr. J. A. Belsiger, who is with Dr. Stuht in Spokane, has a similar agreement with Dr. Frank St. Sure, who has come to Colfax from Chicago. Dr. Balsiger will be in Colfax one day each week.

Dr. L. L. Goodnow, of Aberdeen, has agreed to attend the indigent sick in the local hospital. These individuals are county charges and this action has been taken as a result of a discussion in the council which was started some weeks ago. Dr. Goodnow will act without compensation.

Dr. Louis Maas, of Port Townsend, has recently returned from a trip abroad and will resume practice.

Dr. H. J. Felch, of Ellensburg, has left for the East for a four months' trip, during which he will take post-graduate work in Chicago and Philadelphia.

Dr. E. C. Story, of Montesano, has moved to Olympia, where he will locate in the offices of the late Dr. Strickland.

Dr. Ella Synge, who has practised for the last five years in Alberta, has located in Seattle.

Dr. E. D. Olmstead, of Spokane, has returned from an extended trip through New York, Philadelphia and Washington.

Dr. E. M. Rininger, of Seattle, has resumed practice after several months spent in the hospitals of Europe.

OBITUARY.

Dr. C. E. Wardell, of Seattle, Wash., was killed Nov. 5, by an engine at a railroad crossing. He suffered a fractured skull and a broken leg and died a few hours after injury. He was driving parallel to the engine and attempted to cross the track ahead of it, not realizing his proximity to the engine. He was born in Seattle, twenty-nine years ago. After attending the Seattle schools, he graduated in 1907 from the University of Southern California, at Los Angeles. Since this time he has practised in Seattle.

Dr. J. B. Kelley died in Portland, Ore., Oct. 30. He was born at Rehobis, Ohio, in 1860. He practised for a time in Iowa and later studied medicine in one of the San Francisco colleges, which he left in 1901 and settled at Brownville, Ore. A few years later he settled in Portland.

Dr. Lydia E. Crow died Oct. 25, at Twin Falls, Idaho, at the age of thirty-seven, from pulmonary tuberculosis. She had practised in that city for two years during which time she had made many friends.

CORRESPONDENCE

THE NATIONAL HOSPITAL ASSOCIATION.

Everett, Wash., Nov. 9, 1911.

To the Editor:

At the regular monthly meeting of the Snohomish County Medical Society, Tuesday, Nov. 7, the question of the National Hospital Association and lodge practice was taken up for final consideration, after being for several months in the hands of a subcommittee appointed for that purpose. The question of the National Hospital Association was taken up early in the year when Drs. P. W. Willis, L. H. Redon and Teepell, of Seattle, were present. The details of the workings of this association were then discussed at length, in which discussion the Seattle physicians did their utmost to help get rid of the evil as had been done in King and Whatcom Counties, but when the question was finally brought to a vote, the arguments for and against it led to involvement of lodge practice and the matter was referred to a subcommittee which was to obtain signatures from all the members of Snohomish County Medical Society. At that time the physicians handling the work of the National Hospital Association agreed to sign a resolution to discontinue the work, if lodge practice was included, but the committee found, after securing signatures throughout the county, there remained three men in Everett who refused to sign the petition, including one handling this association work who had previously promised to sign it under such conditions.

During the present year Snohomish County Medical Society has been very contentious and badly divided over this National Hospital Association affair, so much so that it has practically disrupted the county society and destroyed its efficiency. The programs have been largely taken up with men outside of the county and they have usually met but a handful of physicians at the meetings. The outlook for the coming year is a great deal worse and it certainly is a pity that such work, well described in an editorial which appeared in the February issue of

Northwest Medicine of this year as the most flagrant prostitution of the medical profession conceivable, should be the cause.

As is well known, this class of work is infinitely worse than the advertising specialist quacks, for they advertise openly and only in the daily press, while the National Hospital Association has paid solicitors who go from house to house advertising, not only in the newspapers, but, in the case of Everett, two physicians as the best in the community. When we remember that these solicitors make it a point to especially solicit homes where other physicians have patients, it is simply abominable. It is understood, further, that of the charge of $1.00 a month which the National Hospital Association gets, these physicians get but 15 cents per head. The contract and certificate of membership which they deliver to the members has the names of both physicians on its back.

It is practically impossible in certain communities to get rid of this evil and it is believed that the matter should be taken up by the Washington State Medical Association and this curse absolutely forbidden. It seems that no one doing such work should be allowed membership in the state association. This, it is believed, is of infinitely more vital importance than the resolution passed by the House of Delegates at the last meeting to expell any member found guilty of fee splitting, for it strikes at the very foundation of medical ethics. There are undoubtedly some good arguments in favor of fee splitting among physicians and surgeons, brothers in the profession; but to give 85 per cent. of their earnings to parasites living off the medical profession can have no arguments in its favor.

It is regretable that the presidents-elect of the state association and of this county association are the men who are doing the National Hospital Association's work in Everett. This has been brought about by wire pulling and factions, by bringing into consideration with National Hospital Association work the lodge practice and thus getting the votes of the lodge practice men. While both are bad, it seems that nothing has ever been done by the regular medical profession which so completely violates every principle involved in medical ethics as this National Hospital Association. It is believed that it is the duty of Northwest Medicine as the mouthpiece of the profession of the Northwest to agitate this matter so vigorously as to lead to its abolishment. If "the scabs" of the medical profession handle such work it is of no importance, but to have men who are members in supposedly as good standing as others in county, state and national associations handling it, it is a difficult matter to speak well of them at all when their names are brought up in everyday practice; in other words, it is practically an utter impossibility to treat them ethically.

The great defence of the men handling National Hospital Association and other similar work has been to class it with corporation and lodge work. As Dr. Willis well said when present at the Everett meeting, the work of the National Hospital Association is not to be compared with such work. Corporation surgery or practice, so far as can be learned, is practically as old as medicine and surgery and corporation surgery is a matter that should be dealt with by the state or national associations.

The requisites for a membership in the state association and thus of the American Medical Association should not be made harder in one county medical society than in another, and, as long as it is allowed in one part of the state, or in one part of the country for that matter, a small local organization should not have power to handle such matters. One cannot be a member of the state association unless he be a member of the county society, nor can he be a member of the national association unless he be a member of the state association. It should go without argument that the requisites for state membership should be uniform in all counties. Corporation practice or surgery is corporation practice the country over and unless entirely abolished it cannot be done away with in small localities, without unfairness as to admission in the state and national medical associations.

Dr. Will Mayo, ex-president of the A. M. A., and Dr. Mackenzie, ex-vice-president of the A. M. A., are corporation surgeons. Scores of others of the best and most prominent physicians and surgeons in the country are corporation physicians and surgeons. It would be absolutely unfair and, in fact, absolutely impossible to discriminate between corporations, such discrimination being based on amount of capital, size or character of corporation or kind of labor employed. Corporations are corporations whether they be mining, lumber, railroad or any kind of corporation.

As conditions are at present, if a physician does National Hospital Association work in King and other counties he is thereby expelled from membership in such county societies and barred from membership in the state and national organizations. Yet a physician doing exactly the same work for the same hospital association, just across the county line, is president-elect of the state association! And the state association takes precedenco over all county societies. This is so palpably wrong that it seems a meeting of the House of Delegates or of a committee having power to act should be immediately called and this matter adjusted.

In conclusion, it is desired to impress upon the profession this point: It has been mentioned that one cannot be a member of the state and national associations unless he be a member of the county association in which he lives and it has been argued that the state association should accordingly make the requirements for membership therein at least as uniform as possible.

W. S. Durand, M. D.

ARMY MEDICAL CORPS EXAMINATIONS,

The Surgeon General of the Army announces that preliminary examinations for the appointment of first lieutenants in the Army Medical Corps will be held on January 15, 1912, at points to be hereafter designated. Full information concerning these examinations can be procured upon application to the "Surgeon General, U. S. Army, Washington, D. C." The essential requirements to securing an invitation are that the applicant shall be a citizen of the United States, shall be between 22 and 30 years of age, a graduate of a medical school legally authorized to confer the degree of doctor of medicine, shall be of good moral character and habits, and shall have had at least one year's hospital training as an interne, after graduation. The examinations will be held concurrently throughout the country at points where boards can be convened. Due consideration will be given to localities from which applications are received, in order to lessen the traveling expenses of applicants as much as possible. In order to perfect all necessary arrangements for the examination, applications must be complete and in possession of The Adjutant General at least three weeks before the date of examination. There are at present sixty-four vacancies in the Medical Corps of the Army.

REPORTS OF SOCIETY MEETINGS

OREGON.

MARION COUNTY MEDICAL SOCIETY.

Pres., W. B. Morse, M. D.; Secty., G. C. Bellinger, M. D.

The regular meeting of the Marion County Medical Society was called to order by Dr W. B. Morse in the society rooms at the Willamette Medical College, on Tuesday evening, Nov. 1, 1911. The following members were present: W. H. Byrd, H. J. Clements, E. E. Fisher, L. F. Griffith, O. B. Miles, W. B. Morse, W. C. Smith, J. N. Smith, B. L. Steeves, A. E. Tamiesie, F. H. Thompson, J. O. Van Winkle, G. C. Bellinger. Visitors: J. C. Booth, of Lebanon, and Carl Griffith, of Marcola.

Papers.

Parental Periodical Paralysis. By Dr. J. C. Booth. A rare hereditary disease capable of being transmitted through either parent. Tyson, in 1903, collected 35 cases from the literature. John K. Mitchell is responsible for considerable of this observation. It occurs especially in young adults and presents usually a general paralysis of the voluntary muscles except those of the throat, tongue, face and eye. Though attended with loss of reflexes and a loss of electrical reaction, there are no mental or sensory disturbances. The thirty-five cases reported by Tyson covered five generations in three families. Eleven of these included four generations in one family and two of the eleven are under my personal observation here in Oregon. A definite pathology is lacking as no fatal cases are reported. As to cause, autointoxication has been best supported. The attacks come without warning at irregular intervals and last from two or three hours to two or three days. The patient may retire with a sense of fatigue and awaken unable to move. In my cases the pulse is very slow and hard. the respiration shallow and labored, temperature subnormal, tongue coated and breath offensive. No definite findings have been established in any of the body fluids or excretions. The treatment is entirely symptomatic. Two cases reported in detail.

Discussion brought out the idea of a hereditary functional defect.

The Cause and Treatment of Bad Colds. By Dr. Carlton Smith, of Salem. All of the animal kingdom possess to some extent an inherent facility of adapting themselves to changing conditions in the world in which they exist. People generally feel that they wear out a cold and we find a certain justification for this feeling in the negligence of the profession in their consideration and treatment of this seemingly harmless malady. Any sudden temperature change produces through the sympathetic nervous system a contraction of the peripheral vessels and engorgement of the larger, deeper ones. By reaction the blood again seeks the periphery where narrowed vessels in turn direct it to points of least resistance. These are usually the mucous membranes and especially those of the upper air passages. Though perhaps of germ origin the cold probably results from germ invasion following in the wake of the phenomenon expressed. Rational therapeutics calls for the relief of local congestion and the re-establishment of the normal blood distribution.

In discussion, B. L. Steeves said, I am not sure whether colds are constitutional with local symptoms or local with constitutional symptoms but am in favor of the former view. Dr. Smith's plan of treatment is good. It is carried out well locally by adrenalin and cocain, followed by a bland oil.

J. N. Smith: A cold is a germ disease usually taking hold in the nasal mucous membrane. Exposure contributes to the condition which allows the germ to get a foothold. Routine catharsis and sweating are overdone. A spray should be used early and often. Tablets of belladonna and camphor give relief. Patients should be allowed to go out in the open air.

L. F. Griffith: Unequal distribution of blood is a good point in pathology. We carry microorganisms with us and a disturbance of physiologic equilibrium permits their development. Colds are of all types having a duration ranging from a few hours to a few months.

E. E. Fisher: A cold is an infection of the schneiderian membrane with constituional symptoms. It may travel up and involve the antrum and frontal sinus producing headache, neuralgia, etc. Leucocytosis should be encouraged by quinin.

J. O. VanWinkle: The sequelae come to the physician more often than do the acute attacks, especially otitis media. Urotropin has some indications.

W. Carton Smith, closing: It is a failure to adapt ourselves to a change of environment. Primarily not contagious. A constitutional disturbance pointing where vessels have been weakened by dilatation and inflammation. Adrenalin's effect on the vessels, and the use of counterirritants support the view of circulatory disturbance. That the germ waits for a chance to develop is probably correct.

Drs. W. H. Byrd and J. C. Booth joined in urging all to work for a good attendance at the meeting to be held in Albany, December 7.

PORTLAND CITY AND COUNTY MEDICAL SOCIETY.

Pres. Wm. House, M. D.; Secy. G. S. Whiteside, M. D.

The regular meeting of the Portland City and County Medical Society was held in the rooms of the society in the Medical Bldg., 8:30, p. m. Wednesday, Nov. 1st, 1911. Vice-President Dr. N. W. Jones in the chair.

Members present: Drs. Fenton Taylor, Fried, O'Day, Matson, Sabin, Baird, McCusker, Ettelson, Jones, Paul Rockey, Rybke, Yenney, F. Manion, Strohecker, K. A. J. Mackenzie, McArthur, Flagg, Bristow, Pease, Rockey, Parker, Whiteside, Page. Visitors: Capt. M. A. Reasoner, M. D. of Vancouver Barracks.

Elected to membership; Drs. Wm. Spencer, Frank Kistner and Douglas.

Drs. Whiteside and Pease spoke of misuse of books in the Medical Library. On motion of Dr. Strohecker the library committee was requested to change the lock on the library door and keep every one out except during hours of the librarian or one of the library committee. Carried.

Paper.

The Therapy of Syphilis.. By Capt. M. A. Reasoner, M. D. Gives details of methods of treatment used by the U. S. at Vancouver. Takes a Wassermann every three months. In the use of "606" finds the Wassermann became negative in 7 to 90 days. Intravenous method far preferable. Patient is able to go to work next day. Remarkable tonic action of salvarsan. Any case receiving "606 should afterwards be given as much mercury as his physical condition will allow. Many of these cases had unusual disturbances of vision or hearing.

Dr. Matson says in European clinics "606" is now not used much. Chiefly for emergencies. Mercury is relied upon. No man should receive "606" just because he has a positive Wassermann without symptoms.

Dr. Ettelson thinks internal treatment inefficient. Hypodermic injections relied on. Asks why Dr. Reasoner likes biniodide rather than some other preparation. Uses gray oil or mercury salycilate every 5 days. Claims he has no trouble in gluteal muscles.

Dr. Whiteside speaks of the Wassermann being a reaction of infection not one of immunity. Relates experiences with gray oil, malignant syphilis and early tertiary lesions.

Dr. Mackenzie believes in the use of metallic mercury after the method of Mr. Hutchinson, up to five or six grains a day by mouth. Has had in his practice two cases of reinfection after years. Believes a Wassermann should be used to periodically check results.

Dr. Rockey has had some remarkable symptomatic results in the use of salvarsan. Mentions some cases.

Dr. Ralph Fenton speaks of examination of the eyes. Has seen a few cases of syphilitic retinitis after the use of "606". Has sometimes detected a specific retinitis before "606" was given and in consequence has advised delay in administering it.

Dr. H. G. Parker recites a case with perforation of the palate. Three doses of "606" in the course of three months. Negative Wassermann. Later chancre of vulva and roseola.

Dr. F. Manion asks if cases showing no lesions are infectious.

Dr. N. W. Jones reports nine cases of syphilis of the central nervous system. These cases had negative Wassermann of cerebrospinal fluid, but some positive Wassermann in the blood and some showed cytotic test positive.

Dr. Baird speaks of positive Wassermann in tabes being generally reported 75 per cent.

Dr. Matson got 90 per cent in paresis, 45 per cent in tabes in the insane asylum in Salem.

The regular meeting of the Portland City and County Medical Society was held in the rooms of the society in the Medical bldg., 8:30, p. m., Wednesday, Nov. 15th 1911. President Dr. Wm. House in the chair.

Members present: Drs. Baird, Bodine, Coffey, Flagg, Gellert, Amos, House, Holden, Hamilton, R. Fenton, Jefferson, N. W. Jones, Johnson, Murbach, E. B. McDaniel, R. C. McDaniel, K. Manion, Mackenzie, Marcellus, Keeney, Montgomery, Pierce, Pease, Parrish, Rybke, Roberg, Richardson, Sternberg, Schoeffer, Slocum, Sabin, O'Day, Tilzer, Williamson, Walker, Whiteside. Visitors: Drs. Jones of Seattle; McLaren, Little, Rich. Minutes of previous meeting read and accepted.

Proposals for membership: Drs. McLaren and Little.

Paper.

Ptosis of the Stomach and Colon. By Dr. R. C. Coffey. Sometimes the sac of the gastrocolic omentum is obliterated so as to form a ligament which helps support the colon. The only indications for the hammock operation described later are the symptoms, not the anatomic position of the stomach. Gives details of technic and recites symptomatic results. Speaks of contraction of the upper abdominal circumference and of a way of expanding it by unfolding the rectus muscle laterally.

Discussion opened by Dr. A. W. Baird. Thinks this paper very instructive. In regard to widening the upper abdomen by splitting the rectus muscles the incision should be in the median line. The X-ray bismuth pictures show the stomach almost in a vertical position. One shows the bismuth going out of the gastro-enteric opening instead of the pylorus.

Dr. Jones, of Seattle, compliments Dr. Coffey on the paper. Describes inappropriate and inadvisable surgical attempts on neurasthenic women since it brings discredit on surgery in general. Has had satisfactory experience with the hammock operation in a few cases in which there were definite indications for it and where the symptoms were not due to asthenia.

Dr. N. W. Jones has been well acquainted with Dr. Coffey's work and has become much impressed with the sound scientific principles underlying the work and knows that extraordinary care has been taken to try to correct the symptoms by other means than surgery. Believes each case should be worked out very carefully and thoroughly by the physician before giving it up to the surgeon. Twenty years ago Byron Robinson, of Chicago, proved that it is possible for an obstructing ulcer to simulate ptosis of the stomach.

Dr. K. A. J. Mackenzie is interested in the causation of gastrointestinal stasis. Thinks the hammock operation is an evolutionary step toward some better method which will eventually be developed.

Dr. O'Day speaks on the physiologic function of the colon.

Dr. Holden prophesies that many will operate on inappropriate cases unless thoroughly studied before hand.

Dr. E. B. McDaniel has had four successful cases.

Dr. Marcellus asks how much bismuth is given before X-ray pictures; also have any pictures been taken in the recumbent position.

Dr. Coffey agrees with Dr. Holden that he fears some inappropriate cases will be operated on and so has not written as strongly in favor of this subject as he really feels. Has done some operations in inappropriate cases himself. Reiterates that gastro-intestinal stasis resisting all medical treatment is the only indication. The anatomic position of the stomach is no indication whatever. Some cases are made well by the rest cure and some not. In regard to incision he always prefers that in the median line.

Dr. Ralph Walker answers Dr. Marcellus that he gives two and one half ounces of bismuth subcarbonate in a bowl of oatmeal mush. Has taken many pictures in recumbent position.

WASHINGTON.

KING COUNTY MEDICAL SOCIETY.

Pres., G. B. McCulloch, M. D.; Secty., H. E. Coe, M. D.

The regular semi-monthly meeting of the King County Medical Society was held in the Assembly Room of the Chamber of Commerce, Seattle, Wash., November 6, 1911. Meeting was called to order by the president, Dr. McCulloch, at 8 P. M. The reading of the minutes of the last meeting was dispensed with. The president called attention to the recent death of Dr. C. E. Wardell and stated that, in accordance with the custom of the society, the regular meeting would be postponed until the following Monday. On motion of John Hunt, duly seconded and carried, the president was empowered to appoint a committee to draw up suitable resolutions and present them to the society at the next meeting. The following committee was later appointed: W. H. Corson, G. A. Dowling, J. S. Thomas.

The first adjourned semi-monthly meeting of the society was held in the Assembly Room of the Chamber of Commerce, November 13, 1911. Meeting was called to order by the vice-president, Dr. Wright, at 8:04 P. M., about 130 members and visitors being present. Minutes of the last meeting were read and approved. The secretary read a communication from the program committee.

PAPERS.

To What Extent Should the Law Invade the Business Affairs, Domestic Life and the Person in Protecting the Individual and the Community from Disease and Crime and in Developing a Higher Type of Man.—By B. J. Lloyd. A statement of the present health activities of the government; difficulty and necessity of education of the layman. The writer's view upon the following: Present status and proper methods of controlling smallpox; present attitude toward leprosy, cholera and dysentery and necessity for power of health officers in controlling them. Prevalence of tuberculosis and need of education; methods of control of other acute contagious diseases by local health authorities; legal regulation of the sale of liquor, poisons and drugs; early education in sexual hygiene as a means of controlling venereal disease. He closed with a rather forcible arraignment of the legal profession for the inability of law to prevent crime.

Sterilization of Criminals and Mental Defectives—By J. H. Snively. The factor of heredity in criminality and insanity; individual variation; examples of family tendencies to crime and insanity; principle of national economics in the care and treatment of these cases; laws relating to sterilization as passed in several states; criticism of such laws as being punitive and revengeful rather than remedial. There should be asylums for treatment rather than penitentiary for punishment; limited scope of present laws; suggestions for examination and treatment of criminals and mental defectives; the responsibility of the medical profession for education of the public in these matters.

In opening the discussion, Judge John F. Main stated that medicine cannot be considered an exact science and referred to the differing answers to a hypothetical question, these answers he feels being honest and conscientious. Dr. Snively is incorrect in quoting the national constitution rather than the state constitution, which is slightly broader than the national and regulates what the state legislature may do in making state laws. In investigating a case in question recently he has found no instance where this law has been passed upon by the court of last resort. Mandatory laws are not apt to be as just as discretionary, for the trial judge cannot change the law but must rule as the law states. The mood of the judge has nothing to do with the sentence, he must do his duty. Asylum treatment would, no doubt, have a good effect on the criminal, but it is not feasible to abolish the penitentiary. He agrees that the action of many laws is slow and justice sometimes miscarries, but feels that he should defend lawyers against the charges in the first paper.

W. Shannon thinks that Dr. Lloyd's paper should be printed in the daily papers and that it would be of great value in instructing the public. He agrees with Dr. Snively in the main and emphasized the necessity of most careful examinations. Sterilization should not be used as punishment. He thinks the state has no right to enact such a law as punishment, but only as a remedy. He called attention to the fact that criminal tendencies are both hereditary and acquired, and acquired characteristics are not necessarily transmitted. He thinks these laws as drawn admit of abuses, and may go too far and so should be very carefully worked out.

I. Janson considers the subject important enough to be discussed by the public. He thinks these laws are aimed at the root of the trouble and that this is the only manner in which to accomplish permanent results.

D. De Becks stated that there is not proven justification for sterilization. Evolution does not hold true in the supraorganic domain as in the organic. The last word on heredity is not even in sight. He called attention to the fact that the medical profession was responsible for wrong former ideas concerning heredity in tuberculosis and cancer. Instances of one or two families are suggestive but do not afford proof enough upon which to act. Environment has greater influence than heredity.

C. A. Smith referred to the lectures of Dr. Goddard, of New Jersey, in support of Dr. Snively's views and stated that he laid great stress upon heredity. He emphasized the fact that castration and sterilization are not synonymous terms. The latter is accomplished by a very short and easy operation. It is the duty of the medical profession to correct the general false impression concerning this fact. He moved that the president appoint a committee of five to take up this movement, prepare papers and present them to various public clubs and societies, in carrying out a campaign of education along the lines of Dr. Snively's paper. Seconded and carried.

B. J. Lloyd admits that in answering hypothetical questions the medical profession often does disagree, and compares these answers to the opposite opinions which the legal profession holds upon the constitutionality of the laws on sterilization. He thinks the hands of lawyers are tied by technicalities in the law. There are many cold facts in medicine but he agrees that it cannot be considered an exact science. Measures dealing with heredity should be applied only to cases involving heredity.

J. H. Snively emphasized the fact that sterilization should be remedial and not punitive. The remedial object should be kept uppermost and before the minds of all. He thinks that the great majority of judges are entirely conscientious and that the mood of the judge if having any influence at all will be toward too great leniency. The judge should work in conjunction with the resident physicians.

The following amendment to the constitution was read: "Candidates for office may be placed in nomination by any member, from the floor. In case more than two candidates are nominated for any one office, a preliminary ballot shall immediately be taken, each member voting for one. The two receiving the highest vote on such preliminary ballot shall be the only candidates for the said office at the annual election. In the case of candidates for the board of trustees no preliminary ballot shall be taken unless more than four candidates are placed in nomination, then each member shall vote for only two and the four receiving the highest vote shall be the only candidates to be voted upon at the annual election."

Paul A. Turner, E. J. Stubbs and F. G. Ulman were elected to membership.

The applications of Walter Kelton and G. F. Shiley were read by the secretary.

PIERCE COUNTY MEDICAL SOCIETY.

Prest., J. R. Brown, M. D.; Secty., E. O. Sutton, M. D.

The first regular meeting of the Pierce County Medical Society for November was held on the 7th at the Tacoma Hotel, Tacoma, Wash. A considerable amount of routine business was transacted, after which Dr. Keller gave a very delightful review of recent advance work as being carried out in the East and with which he became familiar during a recent and somewhat prolonged stay in the various Eastern cities.

The second meeting in November was held in Parlor A, of the Tacoma Hotel, November 21. Transaction of routine business.

Paper.

Early Diagnosis of Tuberculosis. By Dr. Matson, of Portland, illustrated by the use of charts, diagrams, and a lantern and screen upon which were thrown reproductions of X-ray pictures and photographs. Dr. Matson first urges the well-known importance of an early diagnosis in tuberculosis, stating that while a final or late diagnosis is a matter of considerable ease, the early diagnosis is often quite difficult, and in making the diagnosis every means at hand should be used. He lays especial stress upon the fact that it is the general practitioner and not the specialist to whom is first given an opportunity of an early diagnosis, and hence the importance of this subject to those doing general practice. The greatest consideration should be given to previous history, and every practitioner should master every detail in not only the family history, but the personal history of his patient, not taking for granted statements made by him, but endeavoring to arrive at a correct conclusion in regard to diseases and ailments during the patient's past life. The temperature curve in early tuberculosis is also worthy of much attention. The ease with which this is elevated after even moderate exercise or during the menstrual period, etc., is of diagnostic value. A persistent afternoon temperature of 99.3° is fairly characteristic. In examination of the sputum, the finding of the tubercle bacilli is indicative of a far advanced case. The antiformen method is used. Kernig's method of palpation and percussion of the apices is used, and is of considerable value in determining the amount of retraction of an apex.

Ascultation is not so important as many other methods of diagnosis. The X-ray furnishes only confirmatory evidence and can never supplant nor minimize the importance of other diagnostic measures. The von Pirquet skin test is the most delicate but is of diagnostic value only in children up to five years. It is of prognostic value in nearly all cases. In adults those reacting vigorously are considered favorable cases. In those clinically tuberculous, who do not give a positive von Pirquet, the prognosis is unfavorable. A fairly correct estimation of the severity of the subcutaneous test can be made from observation of the von Pirquet test. In a violent reaction the subcutaneous test might be followed by distressing symptoms. The eye test is confirmatory and also of prognostic value, although is little used. It would never be used following a severe von Pirquet. An early diagnosis then is made after a most minute and careful history, palpation and percussion laboratory tests and X-ray observations.

In discussion, Dr. Quevli believes that the public does not realize the importance of an early diagnosis in tuberculosis, and when it does public sentiment will be so compelling that early diagnosis will be much more common than now, because the general practitioners will give those cases which might be considered suspicious much more earnest attention and study. He does not rely on the tuberculin tests as being specific in diagnosis.

Dr. Stuart Wilson reports that in fourteen of twenty-one cases the very first symptom was fatigue, following little or no exertion. He finds also that persistently recurring tonsilitis, irregularities of menstruation, and an anemic look without true anemia are among the early symptoms. He emphasizes the antiformen method of searching for tubercle bacilli. In nine out of twelve early cases there was greater than 33 per cent of mononuclears. He does not agree that the presence of bacilli in the sputum indicates an advanced case. General discussion.

Dr. Matson, in closing, agrees that the blood count is of importance, but often disappointing; believes that the apparent but not real anemia is due to a deficient quantity of blood with no deficiency in quality. No man should treat a patient for tuberculosis on the strength of laboratory diagnosis only. Eliminate muscular rales or sounds by a warm room temperature. Bacilli in the sputum means that there has been infection, infiltration and destruction of tissue, although he agrees that the area of involvement may be very small, therefore a very favorable case.

A vote of thanks was extended to Dr. Matson, and also to Mr. Shaw, who furnished the lantern and screen.

BOOK REVIEWS

Edited by Kenelm Winslow, M. D.

Clinical Immunity and Sero-Diagnosis.—By A. Wolff-Eisner, M. D. Berlin, Translated by Ray W. Matson, M. D., Portland, Oregon, U. S. A. Professor of Histology North Pacific College of Dentistry and Pharmacy. Pathologist to Multnomah County Hospital, Physician to Portland Free Tuberculosis Dispensary. Revised and edited, with a special introduction, by the author. London, Bailliere, Tindall and Cox, 8, Henrietta Street Covent Garden, 1911. Price $2.50. William Wood & Co., New York.

This book is the second from Portland on the subject of internal medicine this year and we are to be doubly congratulated, first by Wolff-Eisner permitting an American and a Westerner to translate his book and further by having Ray Matson make such a happy choice in the selection of an author and subject for his labors and to do such commendable work on the same. It is to be remembered that Wolff-Eisner is one of the "big men" of Europe, most prolific and dependable and who a few years back presented us with a really splendid book on the scientific diagnosis of tuberculosis. He is further to be remembered as the real father of the so-called Calmette conjunctival test for tuberculosis. Says Matson; "This work represents the first attempt to establish the relations between the results of immunity research on the one hand and clinical medicine on the other, in other words it attempts to bring the laboratory workers and the general practitioner closer together." Anyone who has had difficulty in understanding the nomenclature of the "the new science" of immunity with its serology, bacteriology, etc. will find in this book his catechism. The delightful part lies in the way it is put and one who is a bit "stale" will find great interest in reading the relationship between hay fever, uticaria, eclampsia, syphilis, pneumonia, typhoid fever, etc., and the hazy term "hypersensitiveness." Every attempt seems to be made to explain the why of clinical phenomena. He refers freely to the work of others, but indulges almost to the extent of bad form when von Pirquet appears in his discussion. The chapters devoted to precipitins is made valuable by a short recital of the science of blood stains and their medicolegal significance.

We are pleased to note that a positive reaction to an appropriately given and guarded injection of tuberculin for diagnostic purposes means and means only an active tuberculosis. The laboratory demonstrations of agglutination in its various phases is too brief. Chapters on the complement fixation test, the Wassermann test and the tuberculin reaction especially should be read by all for a comprehensive and tense report on these subjects. Vaccine therapy has merely the essential presented and is good. Chemotherapy, including the much talked of "606", is well disposed of and simply told. If one is interested in the subject of scientific medicine simply told, read this book by all means. FICK

Diseases of the Stomach. By Max Einhorn, Prof. of Clinical Medicine, New York Post-Graduate Medical School and Hospital, etc. Fifth, revised edition, illustrated. Cloth, 531 pages. Wm. Wood & Co., New York, $3.50.

This is the fifth edition of Einhorn's well known treatise. In it will be found a more extended description of radiography than heretofore but some of the newer methods are not noted, as the preference for bismuth subcarbonate to avoid poisoning. A method of making radiograms of the inflated stomach is given and also the use of radium for estimating the size and position of the organ. The reproductions of the radiograms are not so clear as they might be.

Einhorn claims some encouraging results in the treatment of cancer of the esophagus and stomach with radium in the way of palliation. His work in this disease deserves great credit. The chief criticism which might be made in regard to Einhorn's book, and this in common with most other gastrologists, is the ignoring that after all most gastric disorders are secondary to diseases of other parts. Again that gastric analysis is often very misleading and forms but a slight aid in diagnosis. For instance, the author, in his article on hypersecretion, does not mention organic diseases of other parts as etiologic factors whereas (excluding ulcer) the chronic form appears to be almost always a symptom of chronic gallbladder or appendix trouble, or other extragastric disorder (Fenwick). Recent investigations all emphasize the close relationship of stomach, liver, pancreas, and intestines. The stomach, liver and pancreas in their morphogeny all hang from one stem (the duodenum) and what disturbs one disturbs the other. The recently reported existence of achlorhydria with occult blood (Pilcher) in 271 cases of stomach trouble caused by gallbladder and appendix disease, and other most diverse disorders, shows the fallacy of gastric analysis on which so much reliance is too often placed.

Einhorn is foremost as a gastrologist in this country and deserves his high position as a pioneer in this field. Gastrology is perhaps on a weaker foundation than any other specialty, however, on account of the secondary position played by the stomach and because of our rudimentary knowledge of the chemical, physiologic and other factors involved in its disorders. Einhorn is the inventor of the most ingenious methods of diagnosis but even here he has overshot the mark. These very refinements, as the duodenal bucket, often lead to failures in diagnosis which would be avoided by consideration of the general clinical symptoms in the case. WINSLOW.

What to Eat and Why. By G. Carroll Smith, M. D., of Boston, Mass. Octavo of 310 pages. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, $2.50 net.

The author's object is "to present a book describing the fundamental elements of food and the principles underlying its use, the essential reasons why a change of diet in certain diseases is desirable, and how this change may be made in the most practical, time saving way, that there may no longer be an excuse, except in rare instances, for the country physician sending his patient to the city specialist to be dieted after an accurate diagnosis has been made." The book is only fair. The author's style is such that he does not impress upon the reader a clear-cut idea of just exactly what dietetic measures should be used in each case. To be sure this is difficult, for the diet in each individual case differs according to its peculiar requirements, but even so the general principles laid down for each group of diseases is not clearly brought out. The book is too short to do justice to the subject. An introduction on the food problem in general, is followed by chapters on obesity, emaciation, diabetes, gout, arthritis, cardio-vascular, lung, stomach, intestinal, liver, kidney, blood and nervous diseases. A few receipts and some all too short food tables close the volume. The general principles given are those commonly accepted today. The writer shows that by careful use of them success is certain. "Special attention is paid to the why of every statement." Most of the why consists of consideration of the general pathology of the condition discussed, rather than the reasons why certain foods are indicated for certain diseases. Among the commendable features are the strong advocacy of weight reducing in chronic affections, especially of nutritional and cardiac origin, and the inclusion of a number of diet lists, evidently those used by the author in private practice. HEAVENRICH.

A Text-Book of Physiology for Medical Students and Physicians. By William H. Howell, Ph. D., M. D., Professor of Physiology, Johns Hopkins University, Baltimore. Fourth Edition, Revised. Octavo of 1018 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, $4.00 net; Half morocco, $5.50 net.

The author discusses fully many subjects of great interest owing to recent developments. Thus the cause of apnea as residing in acapnia with its many practical lessons. The matter of blood pressure is very fully presented. There is an engrossing section on determination of sex. The recent observation of Walker on the influence of the secretions of the accessory reproductive glands on fertilization are considered. It is shown that the prostatic secretion aids the motility of the spermatozoa, that the secretion of the seminal vesicles has a coagulating property, and that both secretions are necessary for successful fertilization of the female by the spermatozoa. Removal of the testes in young animals causes atrophy of the prostate, apparently indicating that the testes control the development of the prostate by the formation of a hormone. There is much new matter of great importance to the practitioner as well as the student. The growth of physiology is so rapid that all of us need to review the work at frequent intervals to keep abreast of the chief basic study of medicine. One can not consult a better book than Howell's for this purpose. WINSLOW.

The Practical Medicine Series. Volume VII. Pediatrics. Edited by Isaac A. Abt., M. D., Prof, of Pediatrics, Northwestern Univ. Medical School. **Orthopedic Surgery** edited by John Ridlon, A. M., M. D., Prof. Orthopedic Surgery, Rush Medical College, with the collaboration of Charles A. Parker, M. D. Series 1911. Cloth, 237 pages, $1.25. The Year Book Publishers, 180 N. Dearborn St., Chicago.

The section on pediatrics contains an abundance of well

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chosen reviews from the literature of this year. There are several on salvarsan in congenital syphilis, taken from the earlier published articles, especially those reported in the fall and winter of a year ago. While the majority of the references are favorably disposed toward this form of treatment in congenital syphilis, the editor wisely tempers the impression which otherwise might prevail with several words of caution in administering salvarsan to young and weakly infants. Infantile paralysis still occupies a conspicuous place and is here considered in an excellent abstract of I. Wicksham's resumé of the recent work on the subject which is quoted at some length. There are many more important reviews which space does not permit us to consider. MANNING.

The review of the year's orthopedic literature appears to include the more important contributions without attempting to note every title of the increasing list. The editor's comments as usual add spice to the mixture. In no one subject are there recorded great advances during the year. The new material deals largely with improvements in technic and studies in etiology. FASSETT.

The Fourth Physician. A Christmas story by Montgomery Pickett. Illustrated by Gordan Stevenson in colors. Cloth, 144 Pp. A. C. McClurg & Co., Chicago.

This little book tells a rather pathetic story in which the chief dramatis personae are a darkey and three physicians—the fourth the reader must discover. The first physician is an unnatural specimen to the profession, a phenomenon combining in himself a young, haughty, rich and fashionable pediatrist and surgeon with that of a discoverer of the Flexner type. The second is a poor, noble, slum-inhabiting classmate who calls the first down to earth (and heaven). The third is a German of unapproachable highmightiness. The atmosphere smacks a little too strongly of the melodrama and the description of the phenomenon appears rather strained to the mind of the work-a-day, prosaic practitioner. The principal character is an old darkey, a former preacher and now family factotum, and is well drawn. The tone of the book is uplifting and the theme in tune with the Christmas season. As a story it would not divert a patient with renal colic but its interest is fairly sustained. WINSLOW.

Nostrums and Quackery. Articles on the Nostrum Evil and Quackery from The Journal of the American Medical Association. Part I, Quackery. Part II, Nostrums. Part III, Miscellaneous. First Edition. Cloth. Price, $1; with individual's name on cover, 25 cents extra. Pages 509, with 220 illustrations. Chicago: American Medical Association, 535 Dearborn Avenue.

The contents of this book should be familiar to readers of the Journal of the A. M. A., as the articles are collected from its pages. It is the lay public who should read these disclosures of the means used to cheat it. Indeed the volume is intended for the doctor's waiting room and should form as entertaining as it is instructive reading. The very complete consideration given to the marvelous Viavi system is of interest to us, especially since the distinguished discoverers, the Law brothers, of this great boon to the human race are of this coast, and because there are Viavi offices in all of our cities and because mysterious Viavi signs stare us daily in the face. Its wonderful financial success suggests that it is another instance of "the Law and profits." WINSLOW.

Handbook of Diseases of the Eye. By Harry Caldwell Parker, M. D., Clinical Professor of Ophthalmology, Indiana University School of Medicine, Indianapolis. 115 Text Engravings and 26 Chromo Lithographic Figures. 12 mo. 303 pages. Cloth $2.00. F. A. Davis & Co., Philadelphia.

We cannot imagine a more handy or practical book of its kind that this little volume which is intended by the author for the student and general practitioner. It is conciseness from beginning to end yet not dry. The field is well covered, including anatomy and physiology of the eye, bacteriology, refraction, diagnosis and treatment, and the principal operations. It is a sort of Century Dictionary of the Eye. The chapters on The Relation of the Eye and the Nose, and The Eye in Relation to General Diseases might well be read by specialists. The book is well printed and the illustrations and colored drawings are good. SEELYE.

State Board Questions and Answers.—By R. Max Goepp, M. D., Professor of Clinical Medicine at the Philadelphia Polyclinic; Assistant Visiting Physician to the Philadelphia German Hospital. Second edition, revised. Octavo volume of 715 pages. Philadelphia and London. W. B. Saunders Co., 1911. Cloth, $4 net; half morocco, $5.50 net.

The second edition of this work more completely fills the need for such a book than did the previous edition. The evident tendency of the profession towards the larger practice of preventive medicine and serum therapy has been appreciated and many valuable questions containing both of these branches have been asked and answered. The other chapters have, where necessary, been amplified and necessary corrections made. For the purpose for which it was prepared it is very satisfactory and will consequently be largely and much appreciated. HYDE

Practical Medicine Series. Vol. V. Obstetrics. By Joseph B. De Lee, A. M., M. D., Professor Obstetrics, Northwestern University Medical School, and Herbert M. Stowe, Series 1911. Cloth, 233 Pp. The Year Book Publishers, 40 Dearborn Street, Chicago. $1.25.

A condensed annual review of the late literature in obstetrics, considered under four parts: pregnancy, labor the puerperium, the new-born. Some of the matters of interest considered under these divisions are the serodiagnosis of pregnancy, the ferment and anaphylactic theories of eclampsia and toxemias of pregnancy, the use of Momberg's belt in postpartum hemorrhage, the present status of the various methods in Cesarean section, treatment of placenta previa with interesting statistics and the use of human serum and blood in the treatment of hemophilic diathesis in the new-born. A valuable little volume made more valuable by the references to the original articles and trite comments by the editor, J. B. De Lee. LAZELLE.

The Practitioner's Visiting List for 1912. An invaluable pocket-sized book containing memoranda and data important for every physician, and ruled blanks for recording every detail of practice. The Weekly, Monthly and 30-Patient Perpetual contain 32 pages of data and 160 pages of classified blanks. The 60-Patient Perpetual consists of 256 pages of blanks alone. Each in one wallet-shaped book, bound in flexible leather, with flap and pocket, pencil with rubber, and calendar for two years. Price by mail, postpaid, to any address, $1.25. Thumb-letter index, 25 cents extra. Descriptive circular showing the several styles sent on request. Lea & Febiger, Publishers, Philadelphia and New York.

The Medical Record Visiting List for 1912. Contents; Calendar, Estimation of the Probable Duration of Pregnancy, Approximate Equivalents of Temperature, Weight, Capacity, Measure, etc. Maximum Adult Doses by the Mouth, in Apothecaries' and Decimal Measures. Drops in a Fluid Drachm. Solutions for Subcutaneous Injection. Solutions in Water for Atomization and Inhalation. Miscellaneous Facts. Emergencies. Artificial Respiration. Signs of Death. Hints on the Writing of Wills. Table of Signs. Visiting List with Special Memoranda. Consultation Practice. Obsteric Engagements. Record of Obstetrical Practice. Record of Vaccination. Register of Deaths. Nurses' Addresses. Addresses of Patients and others. Cash Account. For 60 patients a week, $1.50 in red or black morroco; for 30 patients, $1.25; for 90 patients, with dates only $2.00. William Wood & Co., New York.